The Mining Journal
AND ATMOSPHERIC RAILWAY GAZETTE,

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 582.—Vol. XVI.] LONDON: SATURDAY, OCTOBER 17, 1846. [Price 6d.

TO MINERS & OTHERS.—TO BE SOLD, BY AUCTION, by Mr. WHITE, upon the premises, at BOTSTONE MINE, BUTTERTON, near Leek, in the county of STAFFORD, on Wednesday, October 21, 1846, without reserve, the whole of the following very valuable

MINING MACHINERY, &c.,

Which consist of, in part, a very powerful WATER-WHEEL, 18-feet diameter by 9-feet breast, cast-iron axle, centres and cranks, complete.
IRON PUMP, 20 yards long, 12 inches calibre, with working barrel, and all the appendages complete; one ditto ditto, 40 yards, 10 inches calibre, with all ditto complete; one ditto ditto, 32 yards, 8 inches calibre, with all ditto complete; one ditto ditto, 28 yards, 5 inches calibre, with all ditto complete.
Large oak pen stock and roller paddle, connecting-rod, engine and beam, capstan, with oak spindle, bound with iron hoops, spear arms and pulleys, drawing machine, with cranks and pulleys, metal grinder, with double pair of large rollers, and 6-feet driving wheel (nearly new), 10 large dressing tubs, with the machinery attached, large weigh beam, scales and weights, 400 yards of 1¼-inch square forge iron, 120 yards of ditto round ditto, a large quantity of sundry forge iron and castings, a complete set of castings for leehob, iron waggons and barrels, 80 yards of ⅝-inch new chain, four large wood sheds, suitable for covering cart or hay sheds, wheel and hand barrows, miners' shovels, hammers, riddles, and other working tools, blacksmiths' bellows, anvil, and smiths' tools, flood gates, a large quantity of foreign deal planks and boards, oak and other timber, about 5000 tiles, doors, windows, and other building materials, long and short ladders, grindstone, with a great variety of other materials, suitable for mining and other purposes. 1

In consequence of the great number of lots to be disposed of, the sale will begin at Eleven o'clock in the forenoon precisely.—George Inn, Alstonfield, Oct. 12, 1846.

HALLENBEAGLE MINE MATERIALS.—PEREMPTORY AND LAST DAY'S SALE.—Mr. TIPPET begs to announce, that he will SELL, BY PUBLIC AUCTION, on Wednesday, the 21st October inst., at Ten o'clock in the forenoon, at HALLENBEAGLE MINE, near CHACEWATER, the following very

VALUABLE MINING MATERIALS—viz.:

One STEAM-ENGINE, 66-inch cylinder (7-feet 9-inch stroke in shaft), with cast-iron beam, three boilers, about 42 tons, and the first piece of rod, cylinder and case, brass condensing work (nearly new).
One WHIM-ENGINE, 18-inch cylinder (4-feet stroke in shaft), with boiler, about 7 tons, iron cage, &c. 2
Whim chains, several fathoms of pumps, working barrels, windbores, door and doorpieces, H and top doorpieces, stuffing-boxes and glands, several horse whims, a quantity of old iron, two anvils, two vices, flat and other rods, sheaves, machine, horse and winze kibbles, launders, ladders, air-pipes, beams, scales, and weights, dial and stand, a great variety of new and old timber, COUNTING-HOUSE FURNITURE, &c.
The above may be viewed on applying to the agents at the mine; and further particulars obtained on application to Capt. John Lean, Camborne; or at the office of Mr. Tippet, in Pydar-street, Truro.
N.B.—The engine and boilers may be sold in the meantime separately, by private contract.—Dated Oct. 14, 1846.

MINING MATERIALS FOR SALE.—TO BE SOLD, BY AUCTION, by Mr. J. HUXHAM, on Tuesday, October 27, by Eleven o'clock in the forenoon, at MEXICO MINE, in the parish of CALSTOCK, near Callington, the following

VALUABLE MINING MATERIALS,

Consisting of ONE very excellent WATER-WHEEL, 30-feet in diameter, and 20 inches in breast, within.—This wheel was built new a very short time since, and is of the best materials and workmanship.
One balance and one main bob, with frame; two 10-fathom lifts, complete, with 8-inch working barrel and 9-inch pumps; one 6-inch working barrel, windbore, and doorpiece; two fathoms of wood pumps, one water-wheel, 7 feet in diameter, 2 feet breast, with bob and sweep-rods; about 200 feet of excellent launders, 16 inches wide; a great many fathoms of zinc air-pipes; one excellent whim, 12 feet in diameter; about 75 fathoms of 6-inch whim-rope, pulley and frame; a quantity of plank; one cistern, 5 feet by 3½ by 4 feet, with beams; quantity of timber, nine fathoms of main rod, 6 inches square; two iron and two wood winze cables, two iron whim cables, five wheel and one hand barrow, smiths' bellows, anvil, vice, and smiths' tools of every description; a quantity of new and old iron, miners' tools, three wire sieves, 30 fathoms of ladders, one iron winze, two tackles and ropes, with various other articles.
All the above materials are in excellent condition, and will positively be sold to the highest bidder.
For viewing the same, application to be made to Capt. W. Knott, on the mine. 3
Dated October 13, 1846.

VALUABLE AND EXTENSIVE FOUNDRY & ENGINE WORK, at ALLOA, FOR SALE, for behoof of a Bankrupt Estate.—TO BE SOLD, BY PUBLIC AUCTION, within the Waterloo Hotel, Edinburgh, on Tuesday, the 27th day of October current, at Two o'clock in the afternoon, at the UPSET PRICE of £7000, and

WITH IMMEDIATE ENTRY,

THE ALLOA FOUNDRY AND STEAM-ENGINE MANUFACTORY, WITH HARBOUR.

THE ABOVE EXTENSIVE AND COMMODIOUS WORKS CONSIST OF—

1. Moulding Shop, 68 feet long, and 30 ft. 6 in. wide, with three cupolas, capable of casting about 20 tons—one of them upon Yates's patent construction—two powerful cranes, two stoves, with railways and carriages.
2. Moulding Shop, 58 feet long, and 30 ft. 6 in. wide, with one crane.
3. Moulding Shop, 70 feet long, and 26 feet wide, with one cupola, capable of casting 4 to 5 tons; two cranes, two stoves, with railways and carriages.
4. A very extensive and varied assortment of moulding boxes, loam plates, core bars, &c., suitable for a large business. 4
5. High-pressure steam-engine, of 10-horse power, for driving the machinery.
6. Steam-Engine Fitting-up Shop, 84 feet long by 26 feet wide, containing large boring mill slide and other lathes, planing, screwing, and drilling machines.
7. Pattern Shop, 66 ft. 6 in. long, and 26 ft. wide, with pattern loft above, 106 ft. long.
8. Pattern Store.
9. Most extensive stock of steam-engine, machine, and wheel patterns.
10. Boiler Shop, 74 feet long, part 22 feet and part 34 feet wide, containing boiler plate heating furnace, punching machine, crane, and forges.
11. Brass Foundry, with furnaces.
12. Counting-house, consisting of four apartments and draftsman's room.
13. Dwelling-house for carter, two-stalled stable, cart and coke sheds, &c.
14. Yard Area, with two sets triangles, for lifting heavy weights, boiler carriage, pipe-proving machine, fire-engine, and cart-weighing machine.
15. HARBOUR, admitting vessels of large tonnage, having a substantial wharf wall, and a set of shears, capable of lifting 20 tons.
16. The Yard, adjoining the river, well adapted for building iron steam-boats.

The whole premises cover nearly two acres of ground, the buildings are of stone, and of modern construction, substantial, and in perfect repair, and are arranged upon the most convenient plan for carrying on the business in all its departments. The neighbourhood abounds in coal; a railway from one of the principal collieries comes to the vicinity of, and could be extended at moderate cost into, the works. At a short distance from, and having an easy communication with, the premises, are three extensive iron-works. The Stirling and Dunfermline Railway will pass at a short distance.
To capitalists of skill and enterprise, the Alloa Foundry and Engine Manufactory are in the highest degree eligible, having every facility as to land and water carriage, and fuel at moderate cost. Foundry work of every kind, steam-engine making, and iron steam-boat building, on a large scale, could be carried on with advantage.
The works are in operation, and may be seen by applying to Mr. Dixon there; and for further information, application may be made to Mr. Brydie, banker, Alloa; Messrs. Lockhart, Hunter, and Whitehead, W.S., 84, Great King-street, Edinburgh (who are in possession of the titles); or to Mr. Mutr, 17, Quality-street, Leith, trustee on the estate.
Leith, October 9, 1846.

FOR SALE—EXTENSIVE AND VALUABLE IRON- WORKS (in close vicinity of the harbour of Aberdeen).—There will be exposed FOR SALE, BY PUBLIC ROUP, within the Lemon Tree Tavern, ABERDEEN, on Wednesday, the 4th day of November next, at Two o'clock afternoon, those extensive and valuable premises, at FOOTDEE, Aberdeen (bounded on the west by the harbour), known as

THE DEE IRON-WORKS,

and long EMPLOYED in the ENGINEERING and MILLWRIGHT BUSINESS, and in IRONFOUNDING, BOILER-MAKING, IRON SHIPBUILDING, BLACKSMITH WORK, BRASS FOUNDING, &c.

These works are very compact, and much more advantageously situated than many other works of the same description, for iron shipbuilding and engineering business—having a WATER FRONTAGE to the harbour, and in close connection with the other parts of the establishment—and the whole lying so contiguous, that all the branches of the business can be carried on under the same superintendence. 5
In the BUILDING-YARD several iron vessels may be proceeding at one and the same time, of from 200 to 2000 tons burthen; and the tools and machinery in this department are believed to be equal to any in the kingdom; there are other accommodations for carrying on this branch of business in its fullest perfection.
In the ENGINEERING DEPARTMENT, the tools and machinery are of the most improved description, and capable of constructing engines or machinery equal in magnitude to any known at the present day; and are sufficient to employ, constantly, from 100 to 150 men. In connection with this department, the building and fitting of locomotives may be carried on to the greatest extent.
The IRON FOUNDING DEPARTMENT is fitted up in the most complete manner, and capable of turning out both heavy and light castings, and of fully employing 60 men.
In the BOILER MAKING DEPARTMENT, which is separate from the iron shipbuilding premises, there is a complete set of tools and machinery, of the best description, capable of employing 150 men.
In the BLACKSMITH Shop there are 12 forges, all blown by fan-blast, with cranes attached to the principal ones, and each forge having a complete assortment of tools, for engineering, millwright, and shipbuilding purposes.
The MILLWRIGHT and PATTERN MAKERS' DEPARTMENT has a full assortment of all kinds of joiner and millwright's tools and fixtures, for the employment of 25 men, with a large stock of the most modern and useful patterns, which will be given over with the works.
There are also the necessary machinery and tools for carrying on the BRASS FOUNDING and FINISHING BUSINESS, and PLUMBER and COPPERSMITH WORK, to a large extent.
The whole establishment, if fully employed, is capable of turning out work to the amount of £60,000 or £70,000 a-year; and having been for several years, and still being, in full operation, the purchaser will have the advantage of commencing business immediately.
The greatest facilities of communication are afforded, by regular trading steam and other vessels, from Aberdeen to London, Hull, Newcastle, and Leith, in the south; and Inverness, Wick, Orkney, and Shetland, in the north.
The extensive improvements on the harbour, now going on, and the projected railway schemes in connection with Aberdeen, afford every prospect of full employment for a work of this description for a long period to come.
If the purchaser were desirous of removing the plant elsewhere, the buildings are so constructed as to be convertable into other manufacturing purposes, at little expense, as there are three fixed steam-engines on the premises.
For further particulars apply to John Hunter, Esq., W.S., 13, Hill-street, Edinburgh; W. Robinson, Esq., advocate, 58, Castle-street, Aberdeen; or to Mr. Vernon, at the works, who will show the premises, and on application, forward a plan of the buildings, and inventory of the machinery, tools, &c.—Aberdeen, September 8, 1846.

*** Copies of the Plan and Inventory may be had, on application, at the office of the *Mining Journal*, 26, Fleet-street, London.

JARROW COLLIERY, in the COUNTY OF DURHAM.— TO BE SOLD, BY AUCTION, under the directions of the executors of the late Thomas Brown, Esq., of London, on Wednesday, the 11th day of November next, at noon, in the Turk's Head, Newcastle-upon-Tyne, all the unexpired term of a LEASE, for 31 years, from May, 1839, of and in the colliery called JARROW COLLIERY, together with all the valuable LIVE and DEAD STOCK thereunto belonging.—Arrangements might be made whereby a considerable portion of the purchase-money would be allowed to remain on the security of the premises. 6
For particulars apply to Messrs. Fry, Loxley, and Fry, 80, Cheapside, London; R. P. Philipson, Esq., Newcastle-upon-Tyne, solicitors to the said executors; or Mr. T. W. Jobling, Jarrow.—Jarrow, Sept. 26, 1846.

GLENKENS LEAD AND COPPER MINES, KIRKCUDBRIGHTSHIRE.—In consequence of MINERALS, of considerable value, having been found on the ESTATES in which the GLENKENS MINES are situate, an Act of Parliament has been obtained, to enable the trustees to GRANT MINERAL LEASES. These mines are situated in the centre of a mineral country, and in the vicinity of the flourishing lead works of Carsphairn, Lead Hills, the Newton Stewart, and Heston Island Copper Mines, the Kirkcudbrightshire Mining Company's works, and others in that part of Scotland. 7
The proprietor has been, for the last two years, exploring and opening the ground, and five promising lodes have been proved, which are now being opened and extended by Cornish miners. There being every prospect of a most satisfactory result at an early period, as appears from the reports of the several mine agents who have inspected the lands, as also of the captain now superintending the works, a company is being formed, to give the mines a fair trial, on the principle of the Cost-book System, by dividing the interests into 1000 shares, of which some few still remain unappropriated.
Plans of the sett, comprising about 1200 acres, and the several reports, may be seen, and every information obtained, at the offices of Messrs. Bullock and Luscombe, No. 35, Lincoln's Inn-fields, to whom applications for shares must be made.

LEAD MINES, INVERNESS-SHIRE.—The attention of CAPITALISTS and of MINING ADVENTURERS is invited to an extensive DISTRICT of rich and promising MINERAL GROUND, situate in the immediate vicinity of excellent roads, and within 10 miles from a shipping port, in the county of INVERNESS, which would BE LET, ON LEASE, upon advantageous terms. Under the superintendence of an experienced mineral agent, a shaft has been sunk to the depth of 20 fathoms; at the month of which, an engine and other works have been erected, and levels have been driven, in different directions, by the proprietor and his agents, with the view of exploring the lodes and strata, which are of a most promising character. A minute survey of the lands and workings has been recently made by an eminent mineral surveyor, whose report, with a sketch and sections of the workings, together with specimens of the ores raised, may be seen, on application, at the office of Edward Slaughter, Esq., 5, Duchess-street, Portland-place, London; and all further local and other particulars may be had upon application to Alex. Macdonald, Esq., Croyand Beauly, Inverness-shire, N. B. 8

TO COALOWNERS—those possessing COLLIERIES, or FIELDS, of CANNEL, PARROT, or other similar highly bituminous qualities of COAL.—WANTED, in LONDON, a SUPPLY of this DESCRIPTION of COAL, for the purpose of manufacturing gas; the coal in question abounds in Lancashire, Yorkshire, Derbyshire, and some other counties in England—in Scotland, and in parts of South Wales, and is found to be superior for gas purposes, particularly in the illuminating power of its gas. Any proprietors possessing such coal, and can deliver it in London, either by sea, canal, or railway, will be pleased to communicate with Joseph Hedley, Esq., General Consulting Gas Engineer, 29, Bucklersbury, London, stating quantity that can be delivered annually, present price per ton, delivered at a wharf or railway station in London, quality, so far as known, and other particulars.—London, Oct. 13, 1846. 9

MINING IN CARDIGANSHIRE.—TO CAPITALISTS AND MINE ADVENTURERS.—TO BE LET, on most advantageous terms, in a rich MINING DISTRICT, near ABERYSTWITH, about FOUR THOUSAND ACRES of LAND, containing numerous lodes, rich in METALLIC ORES, and close adjoining the far-famed and highly productive Lisburne Silver-Lead Mines. Many of these lodes have been recently discovered, and are of a highly promising character. There is first-rate and ample water-power on the estate to work mines to any reasonable depth; and the proprietor would treat, on liberal terms, with any gentlemen wishing to embark in a highly promising mining speculation, or any creditable mining company. 10
Every further particular may be obtained on application (by letter) to Mr. J. M. Davies, Antaron Cottage, near Aberystwith; or to the office of the *Mining Journal*, No. 26, Fleet-street, London.

METROPOLITAN IRON AND STEEL COMPANY. (Provisionally Registered, pursuant to Act of Parliament, 7 and 8 Vic., c. 110.)
Capital £200,000, in 10,000 shares of £20 each.—Deposit £2 per share.
A company has been formed for the MANUFACTURE OF IRON AND STEEL (from cast, scrap, and all descriptions of old refuse iron), which shall be of a superior quality to any hitherto produced in the mining districts.—The objects of the company are fully explained in the prospectus. 11
In allotting the shares a preference will be given to parties in the iron trade.
Applications for shares and prospectuses to be made to Mr. Charles Chilton, No. 30, Moorgate-street; or at the Steam Mills, 135, Old-street.

VALENCIA SLATE COMPANY.
Capital £100,000, in shares of £10 each.
The VALENCIA SLATE QUARRIES, situate in the Island of Valencia, on the south-west coast of Ireland, have been worked on a limited scale for some years, and the superior quality of the slate, and its peculiar adaptation for sawing into slabs, have been fully established.
The demand for Valencia slabs has become very extensive. Having great strength, perfectly true surfaces, and not being affected by acids or grease, nor absorbing moisture, they have been found peculiarly adapted for factory floors, and for warehouses, granaries, maltings, and stores; also for prisons, hospitals, and railway stations, and for the floors, ceilings, and roofs of public buildings. The station at Birmingham is laid with Valencia slab, and a considerable quantity is used at the Model Prison at Pentonville, and at the new Houses of Parliament. 12
There is also a large and increasing demand for these slabs in the colonies, for coffee-drying floors, and for sugar-houses.
To attain the enlarged scale of production required to meet the great demand, it is proposed to increase the capital embarked in the undertaking by the admission of new partners; and to carry it on under the powers, and with the advantages, of the Act for the Registration of Joint-Stock Companies.
For prospectuses and detailed statements, showing the immediate and large returns to be secured, apply to Messrs. Palmer and Nettleship, solicitors, 4, Trafalgar-square, London.

NOTICE TO THE MANAGERS OF MINING COMPANIES, SMELTING WORKS, &c.
Mr. MITCHELL (late Mitchell and Field) begs to announce, that ASSAYS and ANALYSES of all descriptions of ORES, MINERALS, and FURNACE PRODUCTS, are conducted at his LABORATORY, 23, HAWLEY-ROAD, KENTISH TOWN, to which direction all communications are to be addressed. 13
N.B.—Instruction in all branches of assaying and mineral analysis as usual.

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."
Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall. 14

TO ENGINEERS, RAILWAY CONTRACTORS, MINING AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public. 15
References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

WILLIAM FOX AND SON, No. 53, CASTLE-STREET, LIVERPOOL, have always on SALE PIG-IRON, RAILWAY BARS, CHAIRS, and IRON of every description.—TIN PLATES, WIRE, &c. 16

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS. 17

MESSRS. J. PAINTER AND CO., SHAREBROKERS, MINING AND GENERAL AGENTS,
25, *CASTLE-STREET, LIVERPOOL,*
AFFORD EVERY INFORMATION as to the STATE of the MARKETS, PRICES, &c., upon application. 18

MESSRS. R. CLARK & CO. beg to acquaint their friends and the public in general, that they have taken OFFICES as below, where they intend to carry on BUSINESS as STOCK, SHARE, and MINING AGENTS; relying with confidence upon the method adopted by them for conducting all business entrusted to their agency, Messrs. R. C. & Co. solicit a continuance of that support it will be, by strictest attention to all orders, their endeavour to deserve.
N.B.—Money advanced upon scrip and other securities. 19
3, Austinfriars, Broad-street, Oct. 17, 1846.

MR. RYE has BUSINESS to do in Trelawney, Wheal Gill, Mary Ann, Condurrow, Craddock Moor, Kirkcudbright, West Caradon, Gonamena, Old Harrowbarrow, Andrew and Nangiles, South Wheal Francis, South Basset Devon and Courtney, Concord, South Trelawney, East Crowndale, Wheal Franco, Combmartin, and West Trethellan Mines, and West Cornwall and Cornwall Railways. 20
80, *Old Broad-street, London.*

MESSRS. LINTHORNE, JONES, AND CO., STOCK, MINING, AND SHARE AGENTS,
*** Every information will be afforded as to the markets and prices of the above, by application (post-paid) at their offices, 21
43, *THREADNEEDLE-STREET, LONDON.*

WHEAL CORNWALL: 100 shares.
GWINEAR CONSOLS: 256 shares.
WEST PROVIDENCE: 256 shares.—[*Dividend of £1 10s. per share, now payable.*]

MR. R. TREDINNICK will be happy to afford parties every INFORMATION respecting the ABOVE MINES, on personal application at his OFFICE, and proffers his SERVICES to CAPITALISTS and ADVENTURERS in the PURCHASE and DISPOSAL of SHARES of every description. 22
Mr. TREDINNICK being in constant communication with experienced practical agents in the several mining districts, can, with confidence, recommend to shareholders, desirous of acquiring information from personal inspection of the mines, agents on whose reports every reliance may be placed.
MINING AGENCY OFFICE—THREE KINGS-COURT, LOMBARD-STREET.

MINING PROPERTY.—CAPITALISTS who are disposed to INVEST in CORNISH and FOREIGN MINES, will find the present opportunity very favourable for so doing. From large sums having been lately diverted from such investments for railway speculations, standard mines are now selling at prices that will pay the purchaser 20 per cent. per annum for his outlay. There are also other mines that are on the eve of paying dividends, which can be recommended with confidence. 23
Applications to be made to Mr. JAMES HERRON, mining agent, No. 3, Adam's-court, Broad-street, London.

MINING OFFICES, No. 1, ST. MICHAEL'S-ALLEY, *CORNHILL, LONDON.*
Messrs. WATSON & CUELL have received instructions to PURCHASE SHARES in East Tamar Consols, South Tamar, Copiapo, East Rose, Alten, Stray Park, and Mary Ann Mines; and have FOR SALE, SHARES in all the best DIVIDEND MINES in Cornwall and Devon, paying from 18 to 20 per cent. per annum. 24

MR. T. P. THOMAS'S MINING OFFICES, REMOVED from No. 80, Old Broad-street, to No. 18, THREADNEEDLE-STREET. 25

JAMES LANE, MINING SHAREBROKER, 75, *OLD BROAD-STREET, LONDON.* 26

JOHN HARVEY, SHAREBROKER AND ASSAYER, *LISKEARD, CORNWALL.* 27

WILLIAM TRENERY, DEALER IN RAILWAY AND MINING SHARES.—ESTABLISHED TEN YEARS.
OFFICES, No. 50, THREADNEEDLE-STREET, LONDON. 28

WILLIAM H. SMITH, MINING SHARE AGENT 10, *WARNFORD-COURT, THROGMORTON-STREET.*
SHARES in many valuable MINES FOR SALE, and every information will be afforded, on application. 29

TO BE DISPOSED OF, a FEW SHARES, in a very pro- mising COPPER SETT, situated near St. AUSTELL, in the county of Cornwall. This being an undertaking of recent establishment, persons desirous of embarking in mining speculations will commence under very favourable circumstances. 30
For particulars apply to Mr. Charles Goodall, 2, Walbrook-buildings; or to Mr. W. H. Smith, 10, Warnford-court, Throgmorton-street.—Sept. 25, 1846.

WHEAL MARTHA CONSOLS.—TWENTY-FIVE SHARES in this MINE to be DISPOSED OF, at £2 15s. per share; £5 per share have been paid, being the whole amount that can be called for.—Apply to Mr. Ogilvie, No. 10, Austinfriars, London. 31

WANTED (for export), a SECOND-HAND STEAM- ENGINE, in perfect order, of about 15-horse power—condensing, of good construction, Cornish boiler; required for winding and pumping.—Address, full particulars, stating lowest price for cash, delivered on board a vessel, to Mr. Sanders, Tavistock, Devonshire. 32

ALTEN MINING ASSOCIATION.—Notice is hereby given, that a DIVIDEND of FIVE SHILLINGS per share, out of profits made in the half-year ending 31st March last, will be PAYABLE at this office on Monday, the 26th inst., and every other day in that week; and on Wednesdays in every week following, between the hours of Eleven and Three o'clock.—The scrip certificates on which the dividend is claimed, must be left at the office two clear days before the payment can be made.
By order of the board, EDWARD J. COLE, Secretary. 33
Mining Offices, Winchester-house, Old Broad-street, Oct. 9, 1846.

UNITED MEXICAN MINING ASSOCIATION.—The Court of Directors beg leave to inform the proprietors, that the OFFICES of the association ARE NOW at No. 8, FINSBURY-CIRCUS, instead of No. 8, Great Winchester-street.—London, Oct. 15, 1846. JOHN MATHER, Secretary. 34

OFFICE OF THE GOVERNOR AND COMPANY OF COPPER MINERS IN ENGLAND, Old Broad-street, London, October 7, 1846.—The Court of Assistants of the Governor and Company of Copper Miners in England hereby give Notice, that a DIVIDEND, up to Michaelmas last, on the PREFERENCE SHARES capital of the company, will be PAYABLE on and after the 28th inst., at the rate of 7½ per cent. per annum.—The scrip certificates, with lists of the numbers, must be left at the office for registration three clear days prior to payment.—Blank forms of lists may be had at the office. By order of the Court of Assistants,
W. INGLIS, Secretary. 35

OFFICE OF THE GOVERNOR AND COMPANY OF COPPER MINERS IN ENGLAND, Old Broad-street, London, October 7, 1846.—The Court of Assistants of the Governor and Company of Copper Miners in England hereby give Notice, that a DIVIDEND, for the half-year ending at Michaelmas last, has been this day declared, at the rate of 5 per cent. per annum, on the paid-up capital stock of the company, and will be PAYABLE at this office on and after Wednesday, the 28th inst., between the hours of Eleven and Three. By order of the Court of Assistants,
W. INGLIS, Secretary. 36

ALLIANCE GAS COMPANY.—Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the proprietors of the Alliance Gas Company will be HELD at the house, or office, of the company, situate No. 39, Finsbury-circus, in the city of London, on Friday, the 30th day of October inst., at One o'clock in the afternoon precisely, for the purpose of assenting to, or dissenting from, the dissolution of the company.—Dated this 10th day of October, 1846.
By order of the board of directors, J. B. GREAVES, Secretary. 37

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1838, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 38
DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

VIADUCT OF DINAN, FRANCE.—The works of this great viaduct, commenced only on the 5th of June last, are proceeding rapidly—the foundation having already been laid, and the first piles on the right bank driven. A canal has been cut to carry off the water from the river 300 ft. in length; the foundation is on a large scale—having been sunk at least 30 ft. before arriving at the solid stratum, which required the excavation of upwards of 30,000 cubic feet of earth or rock. To show the extent of this work of art, we may state, that it has led to the opening of five beautiful granite quarries—the working of which also is carried on with great activity, and they have already yielded some splendid large blocks, which now cover more than one-half of the extensive *prairie* (meadow) of Vaux. When finished, this will form a useful and splendid specimen of masonic structure.

LITERARY NOTICES.

Cosmos: Sketch of a Physical Description of the Universe. By ALEX. VON HUMBOLDT. Translated by Mrs. SABINE, under the superintendence of Lieut.-Colonel E. SABINE, R.A., For. Sec. R.S.—Vol. I. London: Longman & Co.

The name of Humboldt associates itself with all that is great in science, and investigation into the physical history of the universe; and the volume before us, presenting to the public a digest of his views and observations for more than half a century, is a portion of a work which must be read with intense interest by all who are at all devoted to an investigation into the great and varied operations of Nature. Humboldt has been so constituted man: imbued early in life with an irresistible impulse to the acquisition of various kinds of knowledge, he was occupied for years with separate branches of science—botany, geology, chemistry, geography, and terrestrial magnetism: a thorough insight into which, fitted him for long and arduous journeyings and investigations, which he afterwards undertook, both in the Old and New World; here he found that the separate branches of natural knowledge have a real and intimate connection—rendering the studies of the separate sciences of mutual assistance: traversing extensive continental districts, presenting the most striking contrasts—on the one hand, the tropical and alpine scenery of Mexico and South America; and, on the other, the dreary uniformity of the steppes of Northern Asia: here examining the phenomena of volcanic eruption and agency—and there investigating the history of the glacier and the cataract: at one time traversing the burning tropics, at another the frozen regions of the north—Humboldt has had opportunities for witnessing Nature in all her operations, which, perhaps, no other living man can boast; and, with a mind prepared to take advantage of those opportunities, he has now—in the evening of a varied and active life—given to the world a work replete with information—and that information of the most important and interesting character. We will not further dwell on the merits of a work which will be universally appreciated—replete, as it is, with eloquence, erudition, and the most exciting graphic description of natural phenomena in various parts of the world; but, as a specimen of the unassuming, yet dignified, style of the writer, we will transport the reader to the Cordilleras de los Andes, as described in the volume before us:—"In the Andes of Cundinamarca, Quito, and Peru, furrowed by deep barrancas, it is permitted to man to contemplate all the families of plants, and all the stars of the firmament. There, at a single glance, the beholder sees lofty feathered palms, humid forests of bamboos, and all the beautiful family of Musaceæ; and above these tropic forms, oaks, medlars, wild roses, and umbelliferous plants, as in our European homes: there, too, both the celestial hemispheres are open to his view; and, when night arrives, he sees displayed together the constellation of the Southern Cross, the Magellanic clouds, and the guiding stars of the Bear, which circle round the Arctic Pole. There the different climates of the earth, and the vegetable forms of which they determine the succession, are placed one over another—stage above stage; and the laws of the decrement of heat are indelibly written on the rocky walls and the rapid slopes of the Cordilleras, in characters easily legible to the intelligent observer. The well marked lines of elevation which separate the different forms of vegetable life in the torrid zone, seem there to offer to our view the invariability of the laws which govern the celestial movements—reflected, as it were, in terrestrial phenomena. In the burning plains, which rise but little above the level of the sea, reign the families of Bananas, of Cycadeæ, and of Palms, of which the number of species, included in our floras of the tropical regions, has been so wonderfully augmented in our own days by the labours of botanic travellers. To these succeed, on the slopes of the Cordilleras, in mountain valleys, and in humid and shaded clefts of the rocks, tree ferns, raising their thick cylindrical stems, and expanding their delicate foliage—whose lace-like indentations are seen against the deep azure of the sky. There, too, flourishes the Cinchona, whose fever-healing bark is deemed the more salutary the more often the trees are bathed and refreshed with the light mists which form the upper surface of the lowest stratum of clouds. Immediately above the region of forests the ground is covered with wide bands of flowering social plants, small Aralias, Thibaudias, and myrtle-leaved Andromedas. The Alp rose of the Andes, and the magnificent Befaria, form a purple girdle round the spiry peak. On reaching the cold and stormy regions of the Paramos, shrubs and herbaceous plants, bearing large and richly-coloured blossoms, gradually disappear, and are succeeded by a mantle of monocotyledonous plants. This is the grassy zone, where vast savannahs clothe the high table lands and wide slopes of the Cordilleras, and reflect only a yellow hue. Trachytic rocks, which pierce the turf, and rise high into those strata of the atmosphere which are supposed to contain a smaller portion of carbonic acid, support only plants of inferior organisation—Lichens, Lecideas, and the many-coloured dust of the Lepraria, forming small round patches on the surface of the stone. Scattered islets of fresh-fallen snow arrest the last feeble traces of vegetation, and are succeeded by the region of perpetual snow, of which the lower limit is distinctly marked, and undergoes extremely little change." Our limits prevent us extending these extracts; but shall, in future Numbers, insert portions, particularly from the geological division of the work.

A History of Inventions, Discoveries, and Origins. By JOHN BECKMANN, Professor of Economy in the University of Gottingen. Translated from the German, by WM. JOHNSTON.—Vol. II. London: H. G. BOHN.

We, on a former occasion, noticed the publication of the first volume of this excellent work, being the ninth volume of "Bohn's Standard Library," and the present, and concluding numbers of Beckmann's inventions, supports, in an eminent degree, all that the publisher held out in his prospectus for the monthly publication of established works in Divinity and Philosophy, History and Romance, Science and Polite Literature, under the appellation of "Bohn's Standard Library." These two volumes of Beckmann's works, contain a fund of information and amusement, and bear the impress of deep, and persevering research; while, in every case, the authority is quoted—in tracing through modern and ancient authors, for original discoveries, and successive improvements, connected with the subject upon which he treats; nor has he confined himself to any one particular art or science; but, wherever the opportunity has occurred, of throwing light on the progress of successive ages, in the march of civilisation, he has recorded it; from the growth, cultivation, and mode of cooking vegetables, the manufacture of clothing, in linen, cotton, leather, furs, &c., the establishment of infirmaries, &c., and the discoveries, and working of metals, and minerals, to the manufacture of philosophical instruments, and information connected with the more difficult arts and abstract sciences. The number under consideration, opens with a portrait of J. Watt, and a history of the steam-engine; which, although not in the original work of Beckmann, was thought imperative to introduce it, as being the most important of all modern inventions. In another part of this day's Journal, will be found extracts, which we shall continue to give from time to time.

Harthill's Monthly Telegraph; or, Railway, Coach, and Steam-Boat Guide to all the Conveyances connected with Scotland, with the principal Time Tables of England, Ireland, and Foreign Parts. Edinburgh: Harthill and Sons.

In this age of rapidity of transit, and extensive increase of the means of travelling, by railways, steam-boats, and coaches, a publication, giving correct time-tables, fare-lists, and starting points, is of the utmost importance to the commercial man and the public generally. The work before us appears to be for Edinburgh and Scotland—what Bradshaw's works are for London and England; it commences with well revised time and fare tables for all the Scotch lines—succeeded by those for the north of England, Liverpool and Manchester, and North Western Railways. It contains condensed lists of the sailing of the steam-boats to and from the ports of England, Ireland, Scotland, and abroad; list of coaches in Scotland, connected and unconnected with railways; and a variety of miscellaneous information respecting the locomotion of the country. It is published every month; and the number before us being the 28th, we may reasonable conclude, that it is well appreciated by the public for the accuracy of its details.

THE MOON.—In the course of a lecture on Lord Rosse's gigantic telescope, delivered at Whitby, by the Rev. Dr. Scoresby, of Bradford, the rev. gent. said that the valuable instrument, although erected about 18 months, had not yet been in complete operation more than three or four months, and already several of the nebulæ, hitherto not fully examined, were discovered to be a collection of suns; and, with regard to the moon, the doctor stated its appearance to be magnificent: it appeared like a globe of molten silver, and every object of the extent of 100 yards was quite visible—edifices, therefore, of the size of York Minster, or even of the ruins of Whitby Abbey, might be easily perceived, if they had existed. But there was no appearance of anything of that nature, neither was there any indication of the existence of water, nor of atmosphere. There was a vast number of extinct volcanoes, several miles in breadth; through one of them there was a line in continuance of one, about 150 miles in length, which ran in a straight direction like a railway. The general appearance, however, was like one vast ruin of Nature; and many of the pieces of rock, driven out of the volcanoes, appeared to be laid at various distances. The doctor said he expected it would soon be competent to daguerrotype the image of the moon upon the speculum, which could not be done at present, as the moon was not stationary; but Lord Rosse contemplated a piece of mechanism to move the telescope to a certain distance, with a motion corresponding to the movement of the moon.

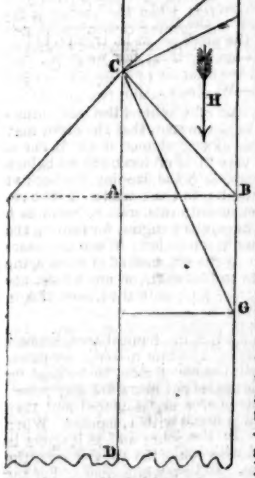
VOLCANOES OF THE MOON.—At the last meeting of the Association of American Geologists and Naturalists, Mr. J. D. DANA read a very interesting paper on this subject; it appears, that in all the geological observations which have been made with regard to the moon, one important feature remained unsatisfactorily explained—namely, the vast magnitude of all its craters, which were described by the non-committal term of King mountains, which geologists have not ventured to acknowledge their belief in these lunar wonders. Some of these were from 100 to 150 miles in diameter, and 20,000 ft. in depth, and of lesser magnitude. These are crowded in great numbers over the larger part of its surface. It was not, therefore, to be wondered at, that there should be much difficulty in reconciling their features with those of Vesuvius and Etna. The crater of Kalinea, in the Hawaiian islands, is of a wholly different character. About two-thirds of the lunar hemisphere, comprising above the whole of the southern half, is composed of these volcanic mountains.—1. The ring mountains, which are broad truncated cones, with immensed circular craters.—2. Conical mountains, which are like ordinary volcanoes.—3. Lunar ridges.—4. Large depressed areas, usually termed seas, but not supposed to contain water.—5. Long, pale streaks, supposed to be fissures. Out of 1095 heights, measured by Beer and Madler, six are above 20,000 ft. in altitude, and 22 exceed 15,750 ft. The broad truncated cones, with large circular craters, are its most common elevations, and are among the loftiest. The pits are of all dimensions, to 150 miles, and of various depths, to near 25,000 ft. The crater, Bally has ascertained to be 149¼ statute miles in diameter; Clavius, 143½ miles; Schickard 128 miles. The depth of Newton is 23,833 ft. The height above the surface, exterior to the crater, is said by Beer and Madler, to be often one-half or one-third less than the height above the bottom of the crater. The pits are generally circular, and sometimes almost artificially regular. There are others, also, which consist of two or more cratered pits; the enclosing walls in many are broken into a series of ridges; sometimes with large openings. The bottoms of the pits, not unfrequently, contain small cones or ridges like elevations. The depressions, called seas, among which are the *mare serenitatis*, and *mare Crisium*, notwithstanding their size, are identical in character with the great pit craters—their extent and depth being their only characteristics. This fact has been clearly proved by Rosse, and their entire structures sustain it. They, too, contain seams and circular areas. The light streaks, alluded to, form radiating lines around some large cones, and especially about those known as Enler, Kepler, Copernicus, and Aristarchus. They are from 1 to 500 miles in length, and cross ridges and depressions without interruption, as if they were bands of light coming up through open fissures; and they coalesce about the summit of Kepler; so that the whole surface appears nebulous in light. Sir W. Herschel first published an account of actual volcanic action in the moon. Mr. Dana here compared the features with those of Kilauea, and showed a correspondence in every particular; and accounted for their size and features on the ground on which the Hawaiian islands rise, that the action was that of boiling over the large areas, and not the ejection of cinders, like the summit elections of Vesuvius. Mr. D. went on to illustrate some points in the structure of our earth, and concluded a very interesting address.—Prof. SILLIMAN asked Mr. Dana his opinion, whether or not there was any water in the moon?—Mr. DANA replied, that there was none, that astronomers could detect.

Original Correspondence.

Mr. JOHN SCOTT RUSSELL'S NEW SYSTEM OF SHIPBUILDING.

Sir,—In my letter of the 7th instant, which appeared in the *Mining Journal* of the 10th, I stated that I could point out numerous other reasons against placing the broadest part of the ship as proposed on the "wave system." Now, something else than assertion will be expected of one having the temerity to call in question the correctness of this favourite hobby of Mr. John Scott Russell's; but "*Ne sutor ultra crepidam.*" I will, therefore, proceed to explain; and, in doing so, will strive to use language which will be understood by the general reader—at the same time, that it carries conviction to the more initiated—rather a difficult task, but I trust to be able to succeed in the attempt.

I will commence by laying down the following proposition, the correctness of which will be at once admitted:—"In traversing a distance equal to her length, a vessel displaces a portion of fluid equal to her weight."—Now, the object to be gained is, to discover how to shape the vessel, so as to make this transposition, with the least possible resistance from the water before the broadest part, which, as I stated in my last letter, is the true measure of the resistance, place it in whatever part of the vessel you will. The resistance before this part arises from three causes—the inertia of the fluid to be overcome, the friction from contact between it and the bows, and the cohesion of the water to the bows and side of the vessel; the two latter much increased by the displaced water accumulating before the broadest part: abaft this broadest part, the shape ought to be such as to enable the vessel to free herself of the water, without any friction, and with the slightest possible cohesion. I will, in the first place, proceed to support my assertion, that, "wherever the broadest part of the vessel is, there will be the greatest amount of resistance to her progress—the amount of which will always increase with the area of that part, place it where you will." When a fluid and a solid meet, the effect of the impression is, at all times, perpendicular to the surface of the solid, in whatever direction they may approach each other; and the more acute the angle of incidence becomes, the less violent will be the contact. A casual observer would directly say, in consideration of the above law, you must construct a vessel with very narrow wedge-like bows, in order to make the angle at which the water strikes them as acute as possible; but I shall be able to demonstrate that, with a *given breadth*, the amount of resistance, from the inertia of the fluid, will be the same, arrange the angle of incidence as you will. As a vessel progresses through the water, the whole of the surrounding fluid is pressing upon her equally, and moves in a direction contrary to that of her course, simultaneously throughout her whole length—consequently, the wedge-like shape of bow is useless—the operation being entirely different from that of rending asunder a solid by means of a wedge;



but to my demonstration. Let A B be half the breadth of a vessel, the line C A D the direction of the keel, and B C one bow; in progressing she will receive the water in the direction of the arrow H: now the angle of incidence will be such as to diminish the violence of the contact in the proportion which the line E F bears to the line C B; and the resistance at any one point in the line C B will be reduced in exactly the same ratio: such likewise will be the case, if the bow was narrowed, so as to represent the line C G,—the resistance at each point of that line being as E F is to C G—infinitely less than it was at C B; but although the violence of contact, and relative resistance in any one point of line, C G, is much less than it is in any one point of line, C B, yet the length of line C G, is just so much longer than the line C B, as to increase the number of points in contact in so exact a ratio with the decrease of the resistance, that, when one is multiplied by the other, they will give precisely a similar result to the amount of the resistance at line C B, multiplied by the number of points in that line, —the space containing the points of resistance increasing as line C B, or C G, is to E F; and the violence of the contact increasing or diminishing in inverse ratio, or as line E F is to line C B or C G—consequently, the result of the resistances is always of similar value with the like breadth, be the angle of incidence what it may.

I hope I have succeeded in putting this so as to be understood by all, as on the complete establishment of this depends the entire theory of shipbuilding. It is from having overlooked this result, that so many narrow, sharp-bowed vessels have been built, and caused the loss and damage of a large amount of property by their want of buoyancy—causing them to labour, and ship a great deal of water, in a sea-way—at the same time, that their fastenings are torn adrift by the unequal resistance they meet with.

A vessel propelled by canvas requires a sufficient buoyancy in the bows to resist the pressure arising from the leverage of the masts, which, when the sails are urging them forward, act across the broadest part of a ship as a fulcrum, depressing the bows in the water, until they are enabled by their buoyancy to resist this action, and divert the remaining energy of the propellant power to its legitimate object—the propulsion of the vessel. Now, in a long narrow-bowed vessel, where the broadest part is thrown far aft, the counteracting leverage behind being diminished, the bows sink deep into the water, before they are enabled to divert the energy of the propelling power to its intended object,—and thus diminish the amount actually available—also, when beating against a strong head sea, the narrow-bowed vessel cuts into the wave, not having buoyancy enough to rise on to it; and thus, not only ships an immense quantity of water, but as the wave passes along to the broadest part, which is placed too much in the centre, it raises her up by the middle, leaving the ends without support—so causing an undue strain on all her fastenings. Many of my nautical friends must have observed a ship in this position, during a heavy gale of wind, when her fore-foot, and several feet of keel, were visible to those on board of a ship near: it may easily be conceived with what a desperate plunge she will descend on the receding of the wave.

I have trespassed a great deal on the patience of you and your readers, —and will merely remark, in conclusion, that from the data I have given, together with other in my possession, the best form of a vessel may be ascertained to a mathematical certainty. It is now nearly 12 months since I sent to the Admiralty some propositions, bearing on this interesting subject—offering to lay my calculations, together with models, &c., before them; but, excepting a mere acknowledgment of their receipt, I have heard no more on the subject. I will, however, through your columns, most probly, develope the principle; but I fear it would take so many letters to do so, that you would think I am engrossing too much of your valuable space.

London, Oct. 14. ——— Nauticus.

THE "GREAT BRITAIN"—SUGGESTION FOR HER REMOVAL.

Sir,—Through the medium of your valuable Journal, I take the liberty of suggesting to Capt. Hosken, and the engineers of the *Great Britain*, if it is not practicable to avail themselves of the immense power of their steam-engines, in assisting to get this noble steam-ship out of Dundrum Bay. Suppose two, or more, of the largest Admiralty anchors, sunk in the best possible position, to which should be attached strong wire ropes, leading to the vessel, and conducted through sheaves, or pulleys, to the main driving-wheel of the engines (detached from the screw), or any other wheel or shaft which the engineers might think the best; at the same time having some powerful steam-tugs doing all that they could, and working in conjunction with the 1000-*horse power* of the *Great Britain*—certainly this immense combination of power would have *some effect* in moving this noble vessel from her much-to-be-deplored situation.—Alvan Penrice.

Workington Colliery, Oct. 10. ———

THE "GREAT BRITAIN" STEAM-SHIP—ANOTHER SUGGESTION.

Sir,—I am thoroughly convinced of your generous and prompt assistance to aid every laudable effort for the advancement of our scientific and commercial pursuits—and beg, through the medium of your influential Journal, to suggest a plan to get off the *Great Britain* steamer from her present situation. I would propose to fix a number of beams across her decks, strongly fastened to the body of the vessel; these beams to project on each side, to which should be appended large floating cisterns, reaching downwards nearly to her keel; the length and number of beams across her, and width and depth of cisterns, to be left to the discretion of the engineer, who, of course, knows the position of the steamer; but I have no doubt such plan, properly applied, and taking advantage of a high tide, and powerful steam-tugs, would release her from her unfortunate situation.

Aberdare Iron-Works, Oct. 15. ——— L. Richards (moulder.)

THE "LOCAL ATTRACTION" OF A SHIP.

Sir,—Whether the loss of the *Great Britain* be justly attributable to a derangement of her compasses by local attraction, as stated, or not, it is an event by no means improbable, and certainly means should be employed to guard against such contingencies. The local attraction on shipboard *now* is of vast amount, arising from the introduction of iron cables, iron tanks for water, &c., in addition to the ordinary materials of that metal, increased infinitely in the case of steamers, and, above all, of iron-built steamers. *Why is Professor Barlow's "correcting plate" not used?* It is founded on sound scientific principles; and the local attraction of a ship is, by its judicious employment, most surely neutralised and rectified. I have one of them in my possession, and tested it; I, therefore, speak advisedly, when I repeat, its principle is founded on a well-known and recognised law in magnetism.—J. Murray: *Portland-place, Hull, Oct.* 14.

SMITH'S PADDLE-BOX LIFE-BOATS.

Sir,—Want of reflection and recklessness of consequences seem to characterise the vast majority of our race—"*Il y a deux sortes des gens dans le monde, ceux qui pensent et ceux qui ne pensent pas,*" is a truism beyond appeal. Worthless seem to be the inquiries and recommendations of our Legislative Commons in the matter of shipwreck—a conclusion at which I have arrived at, finding how very rarely Smith's paddle-box life-boats are employed, though so strongly recommended by the Commons' Committee. On visiting the dock-yard of Southampton, two or three days ago, I confess I was surprised to see that only one, the *Medina*, West India steamer, was supplied with Smith's paddle-box life-boat. Why is the *Oriental* (*e. g.*) about to proceed shortly to the Black Sea, without this necessary adjunct to safety? It takes up no room, and interferes but slightly with symmetry; and what is symmetry compared with the right estimate of human life?—"Less than nothing, and vanity."—J. Murray: *Portland-place, Hull, Oct.* 13.

FAUVELLE'S NEW SYSTEM OF BORING.

Sir,—I have read the statement of this new system of boring, which appeared in your valuable Journal of the 26th September, and I wish to call the attention of our enterprising countrymen to it. I have an estate, which, in the opinion of practical and scientific men, who are acquainted with it, contains a deposit of ironstone and the ten-yard coal; and twice has the operation of boring been applied, but each time in vain—for when the borers, who were men of straw, got to the depth of 150, and the second time to 220 yards, they contrived to break their rods, and thus relieve themselves of the great labour of executing their contract. Now, if some engineer of spirit (or if a company can be formed) will introduce this new system, and thus give a guarantee to proprietors, that they may, without risk of incurring useless expense, have their estates fairly examined, I have no doubt, from the great demand, and, in many places, great scarcity, of coal and ironstone, he (or a company) will soon find an ample remuneration for the application of his skill. Indeed, it strikes me that this invention, if a substantially good one, will open a mine of wealth, not only to the proprietors of land, but to any one, who will introduce it amongst us.—An Admirer of your Journal: *Glasgow, Oct.* 6.

VENTILATION OF MINES.

Sir,—As every suggestion for the better ventilation of coal mines is acceptable to you, I beg to offer the following:—By attaching a blowing cylinder to the engine (which draws the coals up the pit shafts), and pipes therefrom into every compartment of the mines (just in the same way that gas is conveyed through a mansion), a considerable quantity of pure air may be conveyed for the benefit of the miner to any extent—and, when discharged from the pipes, will pass through the workings to the upcast shaft, as in the ordinary way, and, consequently, will cause better ventilation. Should you consider the above worthy a corner in your very valuable Journal, you will oblige by its insertion. A Subscriber.

Oldbury, Oct. 13.

ST. MAURICE IRON-WORKS, LOWER CANADA.

Sir,—I notice that you make a few remarks, in the *Mining Journal* of last week, respecting the iron-works situate near Three Rivers, Lower Canada. I was employed at these St. Maurice Iron-Works for four years, and can, therefore, add to your information some particulars about them. The Hon. Matthew Bell held a long lease of the works, which expired in the spring of the present year; he is as worthy a man as ever lived, and a Scotchman too; for nearly 50 years he has worked them with great economy, and has amassed a large fortune, so that he can well afford to allow them to pass into other hands, which they have done. These works are situate about seven miles from the town of Three Rivers, on the River St. Maurice; they have been in existence for many years; they were worked by the French up to the time we conquered Canada. The old-fashioned water-wheels which blast the ore, while undergoing the process of melting, have been renewed again and again on the old French system; and, in fact, so complete and economical are the works, that it would be impossible to improve on them, or add to their simplicity, by any modern invention of ours. The ore is procured from the bogs in the neighbourhood, and is what is called bog ore; it is found in layers of 6 in. to 1 ft. thick, scarcely 1 ft. from the surface; the men employed to search for it go into the woods, and with small borers, with which they bring the earth to the surface, to the depth of 2 or 3 ft.; when they find a bed of ore, they mark the spot, and a number of hands are immediately set to work to raise it in heaps; these heaps remain in the woods until the depth of winter, when the rivers and marshy places are frozen so hard that they can venture with horses and sleighs to convey it to the furnace. This ore is very rich in iron, but I cannot now remember the per centage; from the length of time these works have been in operation, the ores have been removed for many miles round; I believe it was no uncommon thing when I was there for the ores to be conveyed a distance of 15 to 18 miles before they reached the works. All the ore is reduced by charcoal, and this article is made and carted as great a distance as nine miles from the furnace; hundreds of acres of hard wood have been burnt for this purpose, and the land perfectly cleared—but, woe to the climate, no Englishmen would cultivate it, although the soil is rich enough to produce many of the necessaries of life. The hammered iron made at these works is equal to any Swedish ever produced; it is principally used for making axes for the Canadian to hew his timber, and for horse-shoes; it is in great repute in Canada, and sells freely at 25*l.* per ton for the former, and 25*l.* to 30*l.* per ton for the latter; when I name these prices, I, of course, mean Halifax currency. Canada was at one time entirely supplied with stoves from these works; their superiority, as regards durability, far exceed anything of the kind manufactured in the United States or Scotland; the proprietor got such enormous prices for his manufacture, that the Americans grew envious, as well as the Scotch agency houses there; and now the market is quite glutted with their inferior articles. The superiority of the St. Maurice stoves consists in their not cracking, or at least very seldom, when compared with others, although exposed to heat, which is nearly red at times, especially when the Canadian winter is at its height, and the thermometer ranging from 20° to 30° below *zero*, not freezing point. You say that these works turn out many thousand tons of iron per annum. Now, this is a mistake; about 600 tons of bar-iron, and 1200 to 1500 tons of stoves and other castings, is near the annual produce of the St. Maurice Iron-Works. The River St. Maurice is navigable for craft of about 20 tons, as high up as the iron-works—and, indeed, further for flat-bottomed boats—but the current is very rapid, and the boatmen have, during the months of May and June, great difficulty in pulling up their boats, in consequence of the freshets which then rush down the river from the melting of the snow, in the far north—indeed, as far north as Hudson's Bay: in July, August, and Sept., the river is at its lowest; and, with a rope attached to the boat, the men haul it along as they walk on the banks, which they are obliged to do in two or three places, where the current is too rapid for their doing otherwise. The manufactures of the St. Maurice Works are distributed by agents all over the Canadas; and, in fact, some of them find their way to the fishing stations on the Labrador coast and Newfoundland. I have sketched out the above recollections of my sojourn at these works, which, I trust, may be of interest to your readers—they are facts, and, perhaps, you may think it worth your while to give them insertion in your Journal.

London, Oct. 13. Three Rivers.

DERANGEMENT OF ELECTRIC TELEGRAPHS.

Sir,—The effects of lightning on the wires of the electric telegraphs in America, as announced by the distinguished French astronomer, M. Arago, are not dissimilar to what has occurred in this country, and is a result not to be wondered at; but it is certainly extraordinary, that those who erected them, should not have made any provision for a contingency so natural. I have already pointed out the means of a *certain security*, and the provision is simple. As the supports of the telegraphic wires are too far asunder for the upright wires to be fully protective, intermediate poles for these conductors will be necessary; bearing in mind, that their protective influence is *double their radius*—at least, it would not be prudent to adventure more. The "post being split," is a full proof of the truth and justice of my remarks and recommendation. Had the posts been supplied with copper wire, in the manner of the paragrele, they would *not* have been rent.—J. Murray: *Portland-place, Hull, Oct.* 14.

LAW OF RESISTANCE TO LOCOMOTIVES.

Sir,—I noticed, in your Journal of Saturday last, an extract from a paper by Mr. J. S. Russell, read at the meeting of the British Association, at Southampton, in which he states the "laws of resistance to locomotives;" and, having perused with much interest the different opinions entertained concerning Mr. Greenhow's Geometrical Railway System, and the oft-times certainly not very courteous style of argument exercised by some of the writers, I could not but be struck with the *curious coincidence* between the results of those experiments, and the law laid down by Mr. Greenhow in his pamphlet, which fully bears them out, for at page 21 he says—"When any body is sustaining another, which is moving at great speed, the weight borne by the supporting one is diminished in an exact ratio to the increase of the distance passed over by the moving body in one second of time; because the force of the gravitation within that space of time being about equal to 16 feet, the weight to be sustained will diminish as that quantity is to the number of feet passed over by the body in motion in the like time; therefore, when the rate of speed is at 50 miles an hour, the gravitation, or, more properly speaking, the pressure, of one body upon the other, will be reduced in the proportion which 16 bears to 73⅓, or to less than one quarter of what it would be were the body moving only at 16 feet per second; therefore, a locomotive weighing 20 tons will only require a support equal to about 4 tons 7 cwts., when progressing along the rail at 50 miles an hour—consequently, the friction between the moving parts does not increase in the same ratio with the velocity, because the force, or violence, of the contact diminishes as described." J. S. Flaxman.

Knightsbridge, Oct. 13.

CONSTRUCTION OF RAILWAYS—SUGGESTIONS TO ENGINEERS.

Sir,—Presuming on the ready kindness with which you have ever given space, in the columns of the *Mining Journal*, for my previous effusions, I am so unreasonable as again to request you to give place to one letter more—mind, I do not promise it will be the last, as we are too apt to do when craving favours, without the slightest intention of abiding by the promise, should future circumstances render it desirable to forget it: I will, therefore, act with more ingenuousness, and frankly confess that I may be induced to trouble you again. My reason for writing just now is, that some of my friends, who are aware of my identity with "Q. E. D.," have intimated that I was too severe in my strictures on the engineers, in my letter of the 16th Sept., which appeared in the *Mining Journal* of the 20th. Now, I do not agree with them in thinking so: I did not speak of an individual, but a body of individuals, into whose hands the force of circumstances has placed the entire arrangement of the internal communication of this mighty empire; and as their veto may decide, be it influenced by interest or caprice, so run the channels of international intercourse,—and which, right or wrong, must remain heirlooms from generation to generation. In after times, when railways become better understood, posterity will ask, why was not a more direct route taken, and a better principle applied to the construction of works intended for continued and permanent application? We may well suppose, that, a line once completed, with its stations, cuttings, tunnels, embankments, and bridges, not to take into account the great value of the land destroyed, it will then be too late to discover that a more eligible line of route might have been taken, or a more convenient level adopted. I would, therefore, suggest that engineers ought to pause, and well consider the subject,—taking care to fully ascertain the peculiar features of each locality, to satisfy themselves that the structures intended to be erected are those best adapted to the circumstances, and not rest satisfied that, because a certain mode of structure answered in one place, it necessarily must do so in another, until they are awakened from their dream, by the development of causes and effects, which a little forethought and inquiry might have foreseen and provided against. I speak advisedly when I say, that many lines have been laid out without the engineers having personally passed along the whole distances, so as to make himself conversant with the nature of the soil, or the geological features of the country, in such a manner as to be enabled to avail himself of the natural resources,—and, by applying the material on the spot to the construction of the works, greatly diminish the outlay of capital. There are instances on record, of stones being brought from a great distance over sea, to construct the masonry on railways, when stone quite as good, if not better, abounded in the neighbourhood, and was ready to hand, without the expense of carriage, had the parties laying out the line been at the trouble to ascertain the fact. I have been led into those reflections by the accounts contained in the newspapers of the fall of so many of the bridges on the North British line, between Edinburgh and Berwick —it being by a special interposition of Providence, that an immense loss of life did not occur at "Lintin," the train being actually stopped from going on to the bridge, whilst it was in the very act of giving way: had the labourers, who gave the alarm, not been on the spot, it is frightful to think what the consequences might have been. There is also an account of the fall of some arches near Aberdeen, by which eight valuable lives were lost, and many persons injured and put in jeopardy. Now, Mr. Editor, these things ought not to be—as I said before, they are a disgrace to the age. The slightest deliberation, a little less of that hurry-skurry which has unfortunately been introduced into railway matters—overthrowing everything like common sense in its headlong impetuosity—making the whole proceeding, from the issue of the preliminary prospectus, to the final transit of the steaming trains, a continued series of scrambling and indigested guess work—the only object in view being to get the quickest possible return on the capital embarked, apparently quite unconscious that the great haste must of necessity cause an immense increase in the outlay, and thus the public have not only a most inefficient mode of conveyance, but have to pay an extravagant price for it,—and this all from the want of due deliberation and inquiry on the part of the parties intrusted with the carrying out of the undertaking. Now that there is a pause in the railway mania, we may hope that the evil effects of this precipitancy may make themselves apparent, and so assure an avoidance of it for the future; and what will much conduce to this end is, by the gentlemen of the press pointing out in clear and forcible language the necessity of taking more time to deliberate and consider on the best line of route, and also on the most efficient mode of construction, both as regards economy and safety.

Southampton, Oct. 12. ——— Q. E. D.

THE EUPHONIA, OR SPEAKING MACHINE.

Sir,—Your columns have embraced a paragraph, respecting the speaking machine, now exhibiting at the Egyptian Hall, Piccadilly. In a hurried transit through London, I called to see it, and must acknowledge the high gratification I received from this visit to M. Faber's singularly successful and elaborate mechanism—the "speaking automaton"—an "Andros," the most curious I ever witnessed, and which leaves immeasurably behind, and casts into the shade, all previous attempts to imitate that amazing gift of the Almighty—the human voice. I consider this wonderful achievement a *chef d'œuvre* of the skill and contrivance of man! Prof. Wheatstone's contrivance was a mere toy in comparison, and to refer to the *vox humana* of the organ, in association with M. Faber's invention, is infinitively ridiculous! Its enunciation is wonderfully distinct, notwithstanding it apologises for "speaking with a foreign accent" to an English ear. Its language and its laughter—its whispers and its song, with *articulated words*—were all truly marvellous. The pronunciation of "mamma" and "papa," albeit the most simple, were so fraught with the attribute of babyhood as to be quite startling. I, indeed, wonder this modern Frankenstein did not start at the first articulate sounds of his own automaton? J. Murray.

Portland-place, Hull, Oct. 13. ———

ADULTERATION OF FLOUR, &c.

Sir,—Under the above title, you have a paragraph recommendatory of the use of the soluble extract from bran in hot water. I think the suggestion an important one, not on account of *more weight* gained thereby—for of that I have no experience whatever—but from the fact, chemically con-

sidered, of the extract containing highly nutritious matter lost in the rejection of the bran, which, indeed, embraces the most valuable part of the grain—hence the superiority of "seconds" flour over that which ranks first in popular estimation; but popular predilections are no test of genuine worth—indeed, it generally lies in the opposite direction. For my own part, I invariably prefer brown to *bleached* bread, when deprived of excellent "home made." We intend forthwith to adopt the recommendation.

Portland-place, Hull, Sept. 28. ——— J. MURRAY.

ON THE CAUSES OF HEAT—Dr. PAYERNE.

RESPECTED FRIEND,—The various theories given to the world at different times, to illustrate the causes of heat, light, and electricity, although now considered vague and improbable, have not been followed by explanations which might be said to set the matter at rest—but have been succeeded by theories, which have been, for the most part, refuted. Thus we have been told, that the sun was an immense globe of fire, the heat of which was so intense that it was distributed to the planets—those nearest the sun having, of course, the greatest share; while Herschel received only enough to prevent its being totally frozen. Then our planet, we were told, was also a globe of fire, covered by a thin crust of earth, which would occasionally break in the shape of volcanoes—these volcanoes being the safety valves through which the high-pressure heat found its exit into the atmosphere; the air being the condensor for the superabundant caloric. How we were preserved from being roasted between two such formidable furnaces was not accounted for by these philosophers; but, probably, some of them expected our planet to explode some day. The theory, however, exploded instead; for I presume, that few persons still believe the earth to be in a state of fusion in the centre—the idea is too wild to be seriously entertained. In a former Number of the *Mining Journal*, I had adverted to the subject of heat, in allusion to the working of deep mines; I then stated my conviction, that heat is the result of the combination of different imponderable fluids—this combination being effected by a powerful existing cause; and to this source, I thought, might be traced those various phenomena which have such power on matter. I again recur to the subject; having seen some remarks on the nature of imponderable fluids, by the celebrated Dr. Payerne, in the *Mechanics' Magazine*. He says—"Heat is an effect which has for its cause the combination of bodies. When that combination ceases, the heat disappears, or cold begins to manifest itself, for the one is but the abstraction of the other—in other words, cold is the sign of the chemical repose of bodies; heat, of their animation or mobility."

Thus far this theory has some resemblance to that for which I have pleaded, but it differs in one material respect. The doctor supposes that a fluid, which he calls the *planetary* fluid, exists in our atmosphere—while another fluid, which he calls *stellar*, is sent from the sun by the rays of light, and, combining with the planetary fluid, forms heat. This theory, however, is not exactly new; I have seen something nearly similar in an astronomical work, published a few years since—and I once considered it very plausible, but I have been since led to view the subject in a different light; and to conclude, *that our planet contains all the elements requisite to form heat*—and, thus, that it is not caused by a fluid traversing the vast regions of space, combining with the fluids around the earth; but a few remarks are necessary in support of the theory which I advocate.

It is well known, that particles of the same nature have a repulsive tendency towards one another—while particles of different fluids have a tendency to attract one another. Thus hydrogen, although very light, descends in a vessel containing carbon; and carbon, although heavy, will ascend in a vessel containing hydrogen—in fact, the combination is almost instantaneous. Now, supposing a fluid to exist in our atmosphere, which required a fluid from the sun before heat could be formed, we must suppose that they are both of opposite qualities—or, in the words of Dr. Payerne, the one negative, and the other positive. We may suppose that, if heat was the result of their combination, the atmosphere at the poles would attract the *stellar* fluid from the equator with great rapidity, and thus equalise the heat all over the globe at the same time—or, in my opinion, if a fluid was sent to us from the sun, it would not have much more effect on the equator than at the poles, as the air in that case would be as a receiver for the fluid, drawing the fluid to it; but there is another light in which we may view the subject. In producing artificial heat, we find combustibles, which contain all that is requisite for its development: an exciting cause produces combustion; but, if the theory of Dr. Payerne is correct, we must conclude that natural heat is caused by bodies which do not enter into the formation of artificial heat; for how could we suppose combustible substances, or metals, to be saturated with the stellar fluid since, according to the doctor, heat takes place as soon as a body containing the *planetary* fluid is brought in contact with the *stellar?* But, in my opinion, there is no more difference between natural and artificial heat, than between natural and artificial electricity; but, I may be asked, in what manner the sun acts, in causing a greater degree of heat in the atmosphere, if the earth contains all the elements requisite to form heat? The sun has some influence certainly, and, of course, natural heat could not exist without it, but not by giving us another fluid to effect it, for a fresh supply would be required every day, and then what would become of the *stellar* fluid in the night? would it be lost in immensity, by separating itself from the planetary fluid, as far as the sun would be lighting another part of the globe? This would be certainly, to use the words of the doctor, a "complicated theory." I do not believe that any *matter* reaches us from the sun; but that the sun acts simply as an exciting cause on imponderable fluids. If we consider the result of the power which the sun's attraction exerts on the planetary system, we can concentrate it in one word—*motion*; by this power the planets turn on their axes, and are whirled round the sun—there being a tendency in every particle of matter to move as the result of that power. Now, may we not suppose that the same power has considerable influence on the subtle imponderable fluids which exist in one atmosphere, causing them to enter into combination, or putting them in motion? The effects of this power must, of course, be felt more at that part of the globe which is more directly opposite the sun—the equator—and gradually diminish as it approaches the poles. If this theory is correct, we might attribute natural and artificial heat to the same remote cause—the combination and motion of particles; for I think it probable that, in producing artificial heat, we do nothing more than change the position of particles as regards one another—the intensity of the heat being proportioned to the rapidity with which the combination and motion of these fluids take place. I think that the remote cause of heat may be traced to this source, and perhaps, also, of light and electricity. In alluding to attraction, I do not mean to infer that it is simply a property of matter. I suppose it is rather the result of another remote cause; but it is not essential to examine what that cause may be, to elucidate the above theory, since attraction is universally allowed to exist. JOHN DE LA HAYE.

Liverpool, 10 *mo.,* 12*th.* ———

PIRACY OF INVENTION.

SIR,—Allow me, through your widely-circulated Journal, to appeal to the mercantile classes of the metropolis, to men of science, and particularly to inventors, on the principle of common sympathy. I was a competitor for the premium for the late postage plan—several details of which, of my invention, were pirated, without any communication being made me, except an acknowledgement of the receipt. Among other securities, I suggested the thread to be manufactured in with the paper, as a protection from forgery. There has since been a long correspondence, and a memorial on the subject; and all the answer or redress I can obtain is, that the thread was the invention of others. I applied for the *name* of the person who had conceived the idea, and made it known before the day fixed for the delivery of the several plans; but none has been furnished me. As all redress from the proper authorities appears to be denied me, I make this public statement, to put inventors on their guard how they give up their discoveries to public bodies, as it is contrary to reason and justice that *any part* of an advertised-for plan should be made known before the day mentioned, or appropriated without previous communication with the inventor.

Penzance, Sept. 16. A. T. J. MARTIN.

RAILWAY DEPOSITS.—The Act of Parliament, to amend the 1st and 2d Vict. c. 117, for providing for the custody of certain money paid in pursuance of the Standing Orders of either House of Parliament by subscribers to works or undertakings to be effected under the authority of Parliament, took effect on the 18th of June last, when it received the Royal Assent. In repealing the Act mentioned, it is specially provided that all sums paid under its provisions should be dealt with in all respects as if the present Act had not been passed. By the second clause authority is given to deposit, and by the next the manner of payment is stated, and by the fourth deposits are to be invested. The fifth section has reference to the repayment of deposits. At the termination of the session of Parliament application by petition to the court, in the name of whose Accountant-General the money was deposited, is to be presented, and the money paid out on the certificate of the Chairman or Speaker of either House, that the petition or bill was not allowed, or that the Act was passed.

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—The lode in the 24 fm. level, west of engine-shaft, is much the same as last reported. The lode in the 18 fm. level end, west of flat-rod shaft, produces about 1½ ton per fm. The lode in the western winze, sinking under the 12 fm. level, is considerably improved, producing at present about 1 ton per fm; the end west from this winze, is producing 1 ton per fm. The end west of Nangle's shaft, is at present producing less ore than last reported. We have had a discovery in a pitch east of flat-rod shaft this week, which improves our prospects in that part of the mine; the lode through the slide, in east end, 18 fm. level, producing about a half ton per fm. We have nothing new to report upon at Clon Mines.—T. ANGOVE: Oct. 10.

BEDFORD UNITED.—At Wheal Marquis, the lode in the 80 fm. level east is 2 ft. wide, producing stones of ore in places. In the 70 fm. level east the lode is 2½ ft. wide, and will turn out about 2½ tons of ore per fm.; and in the stopes, in the bottom of this level, the lode is still worth 20*l.* per fm.; the lode in the winze, in the 58 fm. level east is 3 ft. wide, saving work. At Wheal Tavistock, there is no alteration in the 47 fm. level east or west since last report. The lode in the 35 fm. level east is 18 in. wide, composed of spar, mundic, and ore, saving work; in the south engine-shaft the lode is 6 ft. wide, composed of gossan, spar, and stones of ore in places; the lode in the adit level east is 2 ft. wide—gossan and spar, with stones of ore.—J. PHILLIPS: Oct. 13.

CALLINGTON.—Johnson's engine-shaft is sunk 12 fms. 2 ft. below the 112 fm. level, ground hard; at this level, driving east, Johnson's lode is 3 ft. big, composed of quartz, mundic, and clay slate, intermixed with good stones of tin and copper ores; we have met with another branch of the lead lode here, about 6 in. wide, intermixed with silver-lead ores; in the north end we are opening tribute ground. In the 100 fm. level north the lode is hove by a small cross branch; in the south end the lode is small and poor. In the 90 fm. level, driving north, we are opening ground that will set at a moderate tribute; in the south end the ground is hard, with a good branch of silver-lead ores. In the 80 fm. level the lode is producing silver-lead ores. At the north mine, in the 90 fm. level, driving north, we are opening tribute ground; rising in the back of the south level, and sinking from the 80 upon the same, the lode is poor; we expect to communicate this week. In the 80 fm. level the lode continues disordered. In the 70 fm. level the lode is producing silver-lead ore. At Kellybray, the lode in the shaft continues to present the most promising indications, with copper ores disseminated through the lode—some very good stones of the same having been broken within the last few days. Our last parcel, 95 tons, have sold at 21*l.* 3s. per ton.—J. T. PHILLIPS: Oct. 12.

CARADON WHEAL HOOPER.—I beg to hand you my report of this mine, with a detailed statement of our operations during the past four months. Since our meeting in June, a whim-plat has been cut at the 30 fm. level, the shaft divided, the ground cut for cistern, and the lift fixed in it. The engine-shaft has been sunk 4½ fms. below the 30 fm. level; 8 fms. have been taken to sink for 120*l.*, which will put the shaft down 41 fms. below surface, and which we expect to complete in about eight weeks from this time; at this point I should recommend a cross-cut to be driven north and south, to intersect all the lodes in the sett; the ground in the shaft is a light blue killas, interspersed continually with branches, composed of peach, spar, and mundic, with some fine spots of yellow copper ore, and altogether I never saw ground more congenial for copper. A cross-cut has been driven south 14 fms., at the 30 fm. level; and Dawe's lode has been driven on east of cross-cut 8 fms., where it is full 7 ft. wide, but not rich. A cross-cut has also been driven north 15 fms., to cut the Saw-pit lode; but, owing to its underlaying more than was at first calculated, we have still 4 to 5 fms. to drive to intersect it.—J. SEYMOUR: Oct. 1.

CONSOLIDATED TRETOIL.—The lode in Henwood's shaft, sinking under the 70 fm. level, is 2½ ft. wide, producing saving work; in the 70 fm. level east the lode is 1 ft. wide, orey throughout. In the 60 fm. level, west of William's shaft, the lode is 6 in. wide, at present unproductive. In the 50 fm. level, east of Henwood's shaft, the lode is 9 in. wide, opening tribute ground; in the 50 fm. level, east of John's shaft, the lode is 15 in. wide, producing saving work—improved since last reported.—H. WILLIAMS: Oct. 13.

CUBERT SILVER-LEAD.—The ground in the engine-shaft is rather of a hard killas nature, mixed with hard floors of spar. At the 25 fm. level, going east, the lode is 9 in. wide, yielding good saving work, and leaving moderate tribute ground; going west, at this level, the lode is worth about 1 ton of ore per fm. At the 15 fm. level west, in the east of Falmouth land, the lode within the last two days has improved—being now 1 ft. wide, producing some rich stones of lead for several fathoms driving—of late, this end has been unproductive; in this level, driving east, the lode at present is worth half a ton of ore per fathom. With respect to the tribute department, on the whole, the pitches are looking favourable. We sampled, to-day, computed 51 tons of rich silver-lead ores.—RICHARD ROWE: Oct. 9.

EAST TAMAR CONSOLS.—At Whitson, in the 54 fm. level, north and south of Hitchins's shaft, the lode is 2 ft. wide, good saving work. I have put the shaftmen to cut a plat at this level to prepare for sinking, which I shall commence as soon as possible. In the 46 fm. level south the lode is 18 in. wide, good work. At Furzehill, in the 38 fm. level, north and south from Harrison's engine-shaft, the lode is 2 ft. wide, producing very good work. In the 30 fm. level south the lode is 2 ft. wide, good work; our machine-house is up, and the engineers have commenced putting in the machinery for our crushers and stamps. We have sampled, on Friday last, 40 tons of silver-lead ores.—B. ROBINS: Oct. 13.

GRAMBLER AND ST. AUBYN.—Labour cost for the months of July and August, 778*l.* 4s. 4d.; merchants' bills, 262*l.* 16s. = 1041*l.* 0s. 4d. By copper ores sold, 23d July, 1052*l.* 7s. 7d.; tin ores sold, 9th Sept., 55*l.* 13s. 9d. (deduct lords' dues, 64*l.* 8s. 8d.) = 1043*l.* 12s. 8d.—profit, 2*l.* 12s. 4d.; balance due purser last account, 262*l.* 1s. 4d.: now due purser, 259*l.* 9s.

GREAT WHEAL MARTHA CONSOLS.—We beg to inform you, that the pit work in the new engine-shaft is completed, and every preparation is made for sinking 20 fms. deeper—10 fms. of which we set to sink for the sum of 170*l.*, the cost of whim driving and landing included. We have adopted this method to expedite sinking; and we are thoroughly convinced that the work will be thus prosecuted at a saving to the adventurers. The men formerly engaged in driving the deep end west, have to be removed to open on two large lodes in Sharrall's bottoms—a piece of ground lately added to this extensive sett; the result shall be made known to you in our next report.—JOHN PRINCE; THOMAS PENALUNA: Oct. 10.

GUNNIS LAKE.—At Chilsworthy, the lode in the 12 fm. level, west of Bailey's engine-shaft, is 2½ ft. wide, producing some good saving work; the ground in the plat proving harder than anticipated, will prevent its completion before the end of the present week.—W. RICHARDS: Oct. 13.

HAWKMOOR.—In the 15 fm. level, east of Hitchins's shaft, the lode is 2½ ft. wide, composed of capel, spar, and mundic.—P. RICHARDS: Oct. 13.

HANSON.—I beg to say, in Stainsby's engine-shaft, now sinking under the 22 fm. level, the lode is 3½ ft. wide—a strong lode, with some ore; now under the 22 about 8 fms. 3 ft. The rise in the back of the 22, on Stainsby's lode, east of engine shaft, and the winze sunk under the 12, on caunter lode, is holed; and the back of the 22 from the present end, and 8 fms. west of rise to James Hosking's pitch, is set on tribute for 7s. in the 1*l.*—Z. WILLIAMS: Oct. 12.

HERODSFOOT.—The sinking is going on favourably, in congenial ground; and if the lode continues to improve, in the same degree, at the next level, there will be a moderately rich mine open; and if it be only so good as above, it will handsomely pay for opening for tribute. The 52 end, extending south, continues a good orey lode, from 2½ to 3 ft. wide, saving work. The lode is not yet cut at Boase's shaft.

HOLMBUSH.—I beg to inform you, that since the alteration in our pitwork the engine is keeping the water in fork, at the rate of 2¾ strokes per minute; the shaftmen are now busily engaged in dividing and casing the engine-shaft from the whim-shaft, from the 110 to the 120 fm. level. The ground in the 120 fm. level, south of Hitchins's shaft, is favourable for driving; in the same level, driving east of Hitchins's shaft, the lode is 12 in. wide, and worth 7*l.* per fm. In the 120 fm. level, west of the winze, the lode is 12 in. wide, and worth 8*l.* per fm. The lode in the rise, above the 110 fm. level, on the north part, is 10 inches wide, and composed of mundic and stones of ore; in the 110 fm. level south the ground is favourable for driving, and is producing stones of lead in the flookan part of the lode; we have not taken down the lodes from the stopes in the bottom of the 100 fm. level, on the north part; in the 100 fm. level south the lead lode is 5 ft. wide, composed of flookan, prian, and stones of lead; two of the pitches in the back of this level are producing some very good lead, and the men are making fair wages. We sampled on Thursday last our lead ores, computed 12 tons, leaving out 3 or 4 tons that is mixed with white iron and mundic, which requires the process of burning before we can dress it, as it should be dressed to offer for sale.—W. LEAN: Oct. 13.

LEWIS.—At Wheal Nutt engine-shaft, the lode in the 60 fathom level end east is 18 in. wide, producing some good work for tin, and very promising; the lode in the 60 west is 4 ft. wide, composed of spar, mundic, peach, &c. The lode in the 50 east is 2½ ft. wide, worth 10*l.* per fm. for tin; the 50 west is suspended, in order to put the men to drive south to cut the south branch at this level. The lode in the 40 fm. level end east is 2 ft. wide, worth 50s. per fm. for tin; the lode in the 40 fm. level end, west on south branch, is 8 in. wide, worth 40s. per fm. for tin. The lode in the 30 fm. level end east is 1 ft. wide, yielding some tin; the lode in the 30 end west, south branch, is set at 10s. per fm., and 10s. tribute for the tin; we are also continuing to drive south at the 30 fm. level from Oak shaft—ground harder than usual. We are also continuing to drive north at the 20 fm. level from copper ore shaft—ground favourable for driving—where we expect to interesect the north lode, or lode in Bush shaft, in the course of this month. Our tributers at the 10, 20, 30, 40, 50, and 60 fm. levels, are making fair wages at their different tributes. The masons will complete the walls of the stamping engine-house on Thursday next, should the weather prove favourable; and, in four weeks from that time, I hope we shall get our stamping machine to work.—S. S. NOELL: Oct. 10.

MENDIP HILLS.—The men at Stainsby's have not yet finished the timbe work necessary, previous to sinking this shaft; but hope it will be completed by to-morrow evening, when they will immediately proceed to sink with all possible dispatch, as I am anxious to see this lode at a much deeper point. In the 25 fm. level, north of Barwell's shaft, the lode is increased in size since my last report—being now 3 ft. wide, consisting of quartz, carbonate of lime, and flookan; ground not quite so hard for driving as it has been. In the 20 fm. cross-cut, west of new shaft, the ground continues hard for driving.—F. C. HARPUR: Oct. 12.

PENTUAN WHEAL MARY.—The main lode is discovered further south, being about 3 ft. wide, showing a beautiful gossan. We have also traced Polgooth rich caunter lode, and find it to intersect all of our lodes which are at present discovered; if it has the same effect in our sett, that it has in Polgooth, we cannot fail having a rich mine.—JAMES CHYNOWETH: Oct. 14.

TAMAR SILVER-LEAD.—In the 160 fm. level the lode is 9 in. wide, composed of mundic and ore. In the 145 fm. level the lode is 6 in. wide, unproductive. In the 135 fm. level the lode is 1 ft. wide, composed of capel and ore, work of a good quality. In the 125 fm. level the lode is 18 in. wide, 1 ft. of which is good work. In the 115 fm. level the lode is 9 in. wide, producing work of a promising appearance. In the 105 fm. level there has been no lode broken since last report. In the 145 fm. level, north of the shaft, the lode is 1 ft. wide, composed of capel and ore, saving work, but not rich. The incline plane shaft is sunk 8 fms. below the 115 fm. level, and the ground favourable for sinking. We sampled on the 3d inst., 95 tons 18 cwts. 3 qrs. of rich silver-lead ore. At North Tamar, in the engine-shaft the lode is 18 in. wide, composed of capel and mundic, unproductive. In the 60 fm. level, north of the shaft, the lode is 2 ft. wide, orey throughout. At Wheal Hancock, we are still cross-cutting east, and the ground favourable for driving. At Hole's Hole, we are cross-cutting west, the ground is composed of porphyry stone, which is very hard; we have seen some good spots of silver-lead ore in the course of driving. —JAMES SPRAGUE: Oct. 12.

TINCROFT.—We have commenced driving towards the lode at the 100 fm. level from new engine-shaft, and have passed through one branch containing some good quality ore. The lode in the 90 fm. level east is large, with some good quality ore, but not to value; we have not seen the lode beyond the cross-course in the 90 west. The lode in the 80 east is 2½ ft. wide, with some ore, worth 6*l.* per fm.; the lode in the 80 west is 2 ft. wide, worth 15*l.* per fm.; we have just now holed a winze on this end, and shall now set a pitch in the back of this level; we have a winze sinking in the bottom of this level, where the lode is about 3½ ft. wide, worth 26*l.* per fm. The lode in the 70 east is 3 ft. wide, worth about 12*l.* per fm.; the 70 west is worth 10*l.* per fm. The lode in the 50 west is worth 6*l.* per fm. for tin; two or three of our pitches have very much improved since our setting. At Palmer's, no alteration in the shaft below the 70; the lode in the 70 west, just now seen beyond the cross-course, is yielding some copper ore, and kindly. The lode in the 60 west is worth 16*l.* per fm.; our pitches, in this part of the mine, continue to produce fair quality work. At the south mine, our sumpmen continue to break good work for tin from the stopes to the east of the shaft. The lode in the 152 west is 2 ft. wide, worth 20*l.* per fm.; the back of this level is now working at a third tribute. The lode in the 142 east is 4 ft. wide, worth 30*l.* per fm. The lode in the 120 east is large and tinny throughout, worth 10*l.* per fm. The lode in the 110 east is large and kindly. The stopes, in the bottom of the 100, are looking well for tin, worth 30*l.* per fm.—stoping, 2*l.* per fm.; the pitch set at 1s. tribute, in the bottom of this level, is still looking excellent—men getting fair wages at their tribute. Chapple's lode is now yielding good work for tin; on the whole, I am glad to say that our prospects continue good.—W. PAUL: Oct. 12.

TRELEIGH CONSOLS.—In the 100 fm., east of Christoe, the lode is split into several branches, producing stones of ore of not much value; the 100, west of ditto, is driving on a part of the cross-course, expecting soon to cut the lode. In the 90, west of ditto, the lode is 1 ft. wide, very little mineral, expect to hole in a day or two; the winze, below the 90 east, is holed, stoping the back at 3s. tribute; Garden's shaft, below the 90, is sinking in the country; in the 90, east of Garden's, the lode is 1 ft. wide, not much ore; this will be holed in a day or two to the above; in the 90, west of ditto, the lode is 3 ft. wide, worth 24*l.* per fm. In the 70, west of Good Fortune, the lode is 3½ ft. wide, producing some good ore, looking more promising. In the 60, west of Symons's, the lode is 2 ft. wide, worth about 5*l.* per fm. In the 50 west, on north lode, the lode is 15 in. wide, much improved, worth 2*l.* per fm. In the 44, west of Symons's, the lode is 2 ft. wide, rather improved in appearance, without mineral. In the adit, west of ditto, the lode is 2 ft. wide, producing stones of ore. The west shaft is sinking in the country.—WILLIAM SYMONS: Oct. 10.

TREWALLACK.—In the 30 fm. level north the lode is 4 ft. wide, composed of spar, flookan, prian, with lead scattered through the lode—very promising; the hard capel has deserted, and a substitute of spar in its place, and I hope the former will never come back; the ground is much softer; last price 5*l.* per fm., set to them yesterday for 35s. per fm. In the 30 south the lode is 3 ft. wide, composed of spar and flookan, sprigged with lead; the walls of the lode very congenial for lead, carrying mundic also. In the 20 north the lode is 2 ft. wide, with prian, flookan, and lead; this end is pretty much improved in its character since my last visit; in the 20 south the lode is 3 ft. wide, with flookan, mundic, spar, and sprigged with lead; this end is 2 fms. north of Edward's shaft, and when extended south under it, shall put the men to rise against the shaft, hope to complete it this month, and draw the work from the 30 fm. level to Edwards's shaft. In the adit end south the lode is 3½ ft. wide, spar, with a harder branch of prian, flookan, gossan, with lead scattered through it; there is everything promising in this end, and all you can desire, but more lead. Six men are cutting a plat at the engine-shaft, at the 30 fm. level. We cannot boast of a large quantity of lead, but I can say I never saw every level looking so promising at one time, since my visiting the mine; and I do not hesitate to say, that the mine is looking very promising, and particularly the adit end, and the 30 fm. level north and south.—JOHN LEAN: Oct. 10.—[We gave a report of the meeting in our last Journal, and now furnish the managing agent's report, which would have been presented at that time, but for the unavoidable absence of Capt. Lean, as stated by the chairman.—Since the above reached us, we learn that a considerable improvement has taken place in the 32 end going south—a leader of lead, 6 in. big, has saving work; the adit end has also improved.]

UNITED HILLS.—In the 90, east of Williams's shaft, the lode is 3½ feet wide, orey throughout, of low quality, worth 12*l.* per fm.; in the 90, west of ditto, the lode is 4 ft. wide, 2½ ft. good ore, worth 35*l.* per fm. In the 80, east of ditto, the lode is 2½ ft. wide, producing but little ore, worth 6*l.* per fm.; in the 80, north of diagonal shaft, the cross-cut is without alteration since last report. In the stopes, back of the 90, west of Williams's, the lode is 2 ft. wide, orey throughout, of fair quality, worth 25*l.* per fm. In the 70, east of eastern shaft, the lode is 2½ ft. wide, 18 in. ore of fair quality, worth 18*l.* per fm.; in the 70, west of James's north, we expect to cut the lode in the course of a month; in the stopes, in the bottom of the 70, east of Williams's, the lode is 3½ ft. wide, orey throughout, of a coarse quality, worth 12*l.* per fm. In the 50 cross-cut south the ground is a little improved for driving. In the shallow adit end east the lode is 4 ft. wide, 2 ft. ore of low quality, worth 7*l.* per fm. In the 60, west of Harpur's winze, the lode is 3 ft. wide, producing a small quantity of ore, worth 5*l.* per fm. At Wheal Charles, in the 50, east of Gibson's shaft, the lode is 2 ft. wide, poor. In the 40, east of ditto, the lode is 4 ft. wide, 2 ft. ore of fair quality, worth 18*l.* per fm. At Wheal Sparrow, in the 40, west of Richard's shaft, the lode is 18 in. wide, coarse in quality; in the 40, east of Tonkin's winze, the lode is 18 in. wide, 1 ft. good ore, worth 9*l.* per fm. In the 30, west of Turner's shaft, the lode is 2 ft. wide, 1 ft. ore of fair quality, worth 8*l.* per fm. —THOMAS TREVENEN; ROBERT WILLIAMS: Oct. 9.

WEST WHEAL JEWEL.—In the 115 fm. level east, on Wheal Jewel lode, the lode is 18 in. wide, with more ore in it than we have seen for some weeks past. In the 100 east, on the same lode, the lode is 2½ ft. wide, worth 6*l.* per fm. In the 85 west, on the same lode, the lode is 15 in. wide, worth 3*l.* per fm. In the 12 fm. level, west of Quarry shaft, on Tolcarne tin lode, the lode is 2½ ft. wide, worth 35*l.* per fm. The winzes, in the bottom of the 12 fm. level, on the same lode, east of Quarry shaft, are worth 12*l.* per fm. The winze in the bottom of the deep adit, west of Quarry shaft, on the same lode, the lode is worth 15*l.* per fm. In the winze, in the bottom of the deep adit, west of old sump-shaft, on the same lode, the lode is worth 3*l.* per fm.—R. JOHNS: Oct. 12.

WHEAL FORTUNE CONSOLS.—Since my last we have sunk on No. 2 lode; I have much pleasure in being able to state, that it has much improved in depth; the lode is about 3 ft. wide, producing good stones of tin. We are bringing up a lobby to intersect the caunter lodes, and, from present appearances, I have no doubt we shall have a good mine.—J. CHYNOWETH: Oct. 14.

WHEAL LOUISA.—The engine-shaft is down 17 fms. 3 ft.; the ground through which we are sinking is still improving in depth, which indications are very encouraging, knowing that we are approaching the lode. The ground at the south part of the mine, through which we are driving to cut Wheal Arvose lode, is looking well, with strong indications of copper ore.—J. CHYNOWETH.

WHEAL REYNARD.—A grant of a very promising sett has been obtained from Capt. Wm. Pode, of Slade Hall, near Plympton, Devon. The sett at present is about 500 fms. on course of the lodes, and 300 fms. wide, with a promise of more ground to the east, which addition will be giving importance, and accelerate the workings which have been commenced with some vigour. The report of Capt. Williams gives every encouragement:—I have carefully examined Wheal Reynard, and beg to hand you a sketch with my report. There are eight lodes laid open at surface by costeaning, the whole in a base line of 60 fms. north and south; these lodes run nearly parallel to each other—four of which hold out the most flattering appearances. No. 2 has been sunk on about 5 fms., and driven about 10 fms. on its course; the lode is from 3 to 4 ft. wide, producing stones of tin, at least worth 40 per cent. of tin ore, and the remainder of the lode saving work. Nos. 7 and 8 are copper lodes, of large size producing good stones of copper at the surface. Nos. 1, 3, 4, 5, and 6, are li

character tin lodes, of large size, at least 3 ft. wide, producing good specimens of tin at surface; the whole of the lodes above referred to have the most flattering appearance I ever saw; they are composed of good goosan, and all the characteristics that would constitute good lodes, at no great depth. The strata is that of killas, the most congenial to copper and tin, and not more than 150 fms. from granite. No 9 is a large cross-course, intersecting all these lodes to the east of north and west of south; and from my observations in other mining districts, I believe great deposits of copper and tin will be found at the junction of the lode to the cross-course at no great depth. I recommend your taking up an adit, which will intersect all the lodes at the depth of about 15 ms. in driving 100 fms., which will cost at most 150*l*.—R. WILLIAMS.

WHEAL TRELAWNEY.—The sumpmen are progressing very satisfactorily with the 42 cross-cut. The lode in the 32 fm. level, north of the shaft, is 3½ ft. wide, and worth 26*l*. per fm.; in the same level south it is 15 in. wide, and worth 6*l*. per fm. The lode in the 22 fm. level north is 4 ft. wide, and worth 16*l*. per fm.; the winze, under the 12 fm. level north, is holed to the 22 fm. level; the lode in the 12 fm. level north is 3 ft. wide, and worth 18*l*. per fm., and our stopes are also looking well.—P. CLYMO, jun.

WHEAL TREHANE.—Great inconvenience has been felt here for the want of water to dress the ores; but a reservoir for rain water having now been made, it is hoped this difficulty will shortly be overcome. The whim is erected, and good work is now hauling to surface, and the lode throughout the mine looking well. It is calculated that 7 or 8 tons of ore are dressed and ready for sale, and about the same quantity at surface undressed. The lode at the 20 fm. level going south, and which is near the boundary, is still rich; and there is also a good course of ore in the end going north. The lode at the 10 is not sufficiently developed to show what the back will be. With regard to the east and west lode, it was first met with in sinking the shaft on the south side, about 2 fms. from surface; it underlayed north, and came into the shaft 4 ft., when the underlay changed and passed out on the south side of the shaft, at about 8 fms. in depth. This lode never reached the north side of the shaft, nor was the south wall seen in the shaft. A cross-cut has been driven south to intersect this lode under the slide, but it has not yet been seen, although 10 or 12 fms. have been driven; it is, therefore, supposed to be either on the north side of the shaft, or still beyond the cross-cut south. They have driven on the course of Trelawney lode north, through the slide—but as the latter was passed near the shaft, it must have passed over the east and west lode; if it be in this direction it cannot be intersected without sinking and cross-cutting under the slide.

FOREIGN MINES.

ASTURIAN MINES.—Advices have been received within the past few days from the agents of the company, which are of a highly satisfactory nature, and of which the following are extracts:—*Sept.* 14.—I am more anxious to get this first furnace in blast than I have ever been to get a furnace in blast in my life, because I feel assured I shall get such results as will not only satisfy you of the immense value of this concern, but astonish the unbelieving; I make no doubt of the shares going to a premium. *Sept.* 18.—I tried the blast engine on Saturday last with two of the boilers; it works perfectly, and is an excellent engine in all its parts, and one which will do good service to the company—it is highly creditable to Messrs. Graham, the contractors.

Oct. 7.—The equinoxial gales have brought us some bad weather, which has caused some little slackness this last fortnight; I am, however, still getting on well—the furnace is up to the last ring—the foundations for the lifting apparatus nearly up to height—the hot air stoves done: in short, I most fully expect to be ready to go into blast by the end of November.

CINNABAR MINE.—The following is an extract of report, dated 7th Oct.:—I am most happy to tell you, that the Eugenia Cinnabar Mine has taken a most fortunate turn; by the account of stock taken, which I send by this same post, you will see that you have already extracted 5584 quintals, or about 253 tons of mineral; and I should say, from the inspection I made of the mine, that there is about three times the quantity extracted to be got from the present workings,—so that, although the outlay in that mine has been very considerable, compared to the work done, the result is still most excellent, as you will see by the following rough calculation. M. Paillette (the French mineralogist), who assisted in taking the samples, estimates the produce of the mineral extracted at about 10 per cent., which would put its value at the present price of mercury (viz., 1434 rs. 13 per quintal) at about 8000*l*. As, however, the largest portion of the stock is ore but very lately extracted, and "through and through," as it came out of the mine, I do not consider it safe to estimate it at more than about 6 per cent. in mercury, as a mean which puts the value of the extracted at about 5000*l*.; and I think you may rely on a product of from 12 to 15,000*l*. from the mine, even if its present favourable features should not continue, which, however, I cannot expect will be the case, but the contrary. The mine is looking so well, and has so recently taken a turn, which has made it not only the most valuable in the province, but even more valuable than all the others put together.

ST. JOHN DEL REY MINES.—*Morro Velho, July* 28.—Heads working during 28 days, 68. The supply of ore has only been middling, and the quantity of sand collected from the strakes indicates only a middling produce. Capt. Trelour says, his people are doing duty; but that he wants more hands. Forty of his borers are employed upon dead works; in the mine there is nothing new. The sinking in the Bahu is proceeding very well at present, with a heavy force. The mechanics have nearly completed everything necessary for repairing one-half of the Lyon stamps.

GOLD MINES OF RUSSIA.—We learn that the produce of the Russian gold mines, for the first six months of 1846, has been—private account, 95 poods 36 lbs.; Government account, 69 poods 35 lbs.=165 poods 31 lbs. Each pood being equal to 40 lbs. Russian, or 36 lbs. English, and, therefore, giving 5948 lbs., being at the Mint price equal to about 370,000*l*. We have not the return for the corresponding part of 1845; but for the whole of that year the produce was equal to 3,160,000*l*., so that the last six months exhibit a great proportionate decline compared with last year, or indeed with any recent year. The actual quantity produced is always considerable larger than that given in the returns; for, as there is a heavy tax payable to the Government on that produced on private account, smuggling takes place to a great extent.

[FROM CORRESPONDENTS.]

CREEGBRAWS.—The improvement within the last few months has been very considerable, and, up to the present time, she is gradually improving.

DEVON AND COURTNEY CONSOLS.—They are progressing very rapidly with the engine-shaft, in a beautiful killas. The deep adit is driving in good ground on course of the lode, having ore 1 ft. wide, with peach, &c., and looking extremely well. On the north lode, the shaft is down about 11 fms.; the lode is about 6 ft. wide, with beautiful stones of ore. The shallow adit, on the same lode is being driven in most promising ground, with strings of copper throughout.

EXMOOR ELIZA.—The work done here has been confined to cosseaning on the south lode, or, I presume, junction of lodes, being 27 ft. wide—the sinking a shaft on this, and the driving a cross-cut to intersect it further east, where the lode presented the same appearances as in the shaft, being very large, with little underlay, composed of gossan, impregnated with ore; in driving this cross-cut some branches of copper, which will at a greater depth fall into the lode, were intersected; in sinking the shaft we found very fine stones of copper, producing 14¼ to 19¼ per cent. The late captain, without consulting the adventurers, made a whim round—this was useless, as we determined on drawing the stuff by the water-wheel; but, in doing this, he discovered another lode, 15 ft. wide, containing gossan and copper; this lode is 30 ft. from the south lode. A water-wheel, pumps, and other machinery, have been purchased, with about 500 ft. of timber; the materials are paid for and shipped, yet there is a balance in favour of adventurers of 37*l*.—no arrears of call. The sett is 2500 acres; water power abundant at all seasons.

GREAT ROUGH TORR CONSOLS.—Another extraordinary lode has been cut, discovered in this sett, which is spoken of as equal, if not surpassing, the first discovery. In a few posts the fact will be confirmed, on its being more fully developed.

LANEAST CONSOLIDATED MINES.—An extensive sett, situated between Launceston and Camelford, has been granted to Capt. R. Moore and Mr. R. Rowe, for raising manganese, and such ores, &c., as may be found within the sett. Captain Moore appears to be well conversant with coloured earths or ochres; for he has not only shown that the presence of manganese can be readily detected by the experienced eye of practical men, but that Vandyke brown, umber, &c., is to be met with, where enterprising persons display their judgment. These ochres are met with in abundance—samples of which have been sent to colour merchants of Bristol, and an offer of 18*l*. per ton received for any quantity that can be raised—from whence it is estimated that upwards of 300*l*. worth can be extracted weekly; about 9 tons is now in course of dressing for the market. A copper lode has also been discovered in the sett, but little can be said of its value until more fully developed.

SOUTH MARIA.—The purser (Mr. J. Seccombe) under date, Tavistock, Oct. 6, writes—"It is with pleasure I inform you, that our machinery is completed, and works in good style; the whole appears to give credit to the contractors, and the present ease with which the wheel pumps the water, proves itself to be of great power, and will answer every purpose, if not more than was originally assigned it. A general meeting of adventurers will be held at the count-house, on Tuesday, the 20 inst., to examine the machinery, and other works; then to adjourn to the Cornish Arms, Gunnis Lake, to consider future operations, and transact other business relative to the affairs of the said mine. Those in arrear with their cost will have their individual cases brought before the meeting, to be dealt with as it may think fit. The auditors will meet at the count-house, at 10 o'clock, to audit the accounts."

KIRCUDBRIGHTSHIRE MINING COMPANY.

A meeting of adventurers was held at the offices of the company, Birchin-lane, on Tuesday, 13th inst.

W. ABBOT, Esq., in the chair.

The CHAIRMAN briefly remarked upon the pleasing prospects of the company, and referred the shareholders to the various correspondence which had taken place, relative to their affairs; he called attention to the captain's report, which he considered of a highly encouraging character.

Mr. T. HACKET (the secretary) presented a detailed statement of accounts, showing a balance in favour of the mine, at their last meeting, of 190*l*. 4s. 2d.; and that the cost for September were 221*l*. 12s. 7d.: leaving a balance against the company of 31*l*. 8s. 5d.; to meet which, and the further operations of the mine, a call of 1*l* per share was made.—[A general satisfaction appeared to prevail amongst the shareholders, as to the present management of their affairs; but as much of the proceedings contained matters of a more private nature, we refrain from publishing that which might effect their present prospects.]

STRAY PARK AND CAMBORNE VEAN MINING COMPANY.

A general meeting of adventurers was held in the account-house, on the mine, on Friday, the 9th of October, when the following statement of accounts were presented by W. Vawdrey, purser and manager:—

Receipts and Expenditure.

Dr.				Cr.			
Tutwork cost in July and Aug.	£880	15	0	Aug. 7.—Balance in hand	£702	11	10
Merchants' bills ditto	427	16	11	„ 6.—Copper ores sold	2695	11	5
Tribute pay on ores sold, Aug. 6	230	11	10	Tin stuff	7	3	3
Subsist advanced on ditto	406	0	3				
Lords' dues payable on ditto	112	6	4				
Balance	1347	16	2				
Total	£3405	6	6	Total	£3405	6	6

Assets and Liabilities.

Oct. 9—Dividend of 1*l*. per sh.	£1000	0	0	Sept. 1.—Balance in hand	£1347	16	2
Current cost in Sept. and Oct.	——			Oct. 1.—Copper ore	2448	18	5

Av. monthly gettings of men in July & Aug.—Tutworkmen, 2*l*. 14s. 6d.; tribute, 2*l*. 2s. 6d

The accounts, for the months of July and August, showing a balance in favour of adventurers of 1347*l*. 16s. 2d., having been examined, were allowed.

A dividend of 1*l*. per share was made, to be paid by the purser within seven days from this date.

The following report from Capts. R. Eustice and E. Ralph was then read:—In the eastern rise, above the back of the 70 fm. level, on the south lode, the lode is 1½ ft. wide, yielding 2 tons of ore to a fm. In the western rise, above the back of the 70 fm. level, on the south lode, the lode is 2 ft. wide, yielding 4 tons of ore to a fm. In the 70 end, driving west, on the south lode, the lode is 2 ft. wide, yielding 2 tons of ore to a fm. In the 80 end, driving west, on the south lode, the lode is 2 ft. wide, yielding 2 tons of ore to a fm. In the 90 end, driving west, on the south lode, the lode is 1 ft. wide, yielding very little ore. In the winze, sinking below the 90 fm. level, the lode is 2 ft. wide, yielding 2 tons of ore to a fm. In the 100 end, driving west, on the south lode, the lode is 2 ft. wide, yielding 2 tons of ore to a fm. In the winze, sinking below the 100 fm. level, on the south lode, the lode is 3 ft. wide, yielding 5 tons of ore to a fm. In the 110 end, driving west, on the south lode, the lode is 2 ft. wide, yielding 2 tons of ore to a fm. In the 120 end, driving west, on the south lode, the lode is 1½ ft. wide, yielding 3 tons of ore to a fm. In the winze, sinking below the 120 fm. level, on the south lode, the lode is 1½ ft. wide, yielding 2 tons of ore to a fm. In the 150 end, driving west, on the south lode, the lode is 1 ft. wide, yielding 1 ton of ore to a fm. In the 150 end, driving east, on the south lode, the lode is 3 ft. wide, yielding 4 tons of ore to a fm. In the 180 end, driving east, the lode continues split into small veins, producing stones of ore. The tribute ground is looking very well, and our next sampling will exceed 500 tons. Since our last report, the communication at the 140 fm. level has been made between Stray Park Old Mine, and Camborne Vean engine-shaft; and we are now drawing up the pit-work from Stray Park engine-shaft, which, together with the 60 inch cylinder steam-engine, will be ready for sale before the expiration of the next two months. By making the above communication at the 140 fm. level, we have discovered that Stray Park main lode is gone off to the north of all the former workings in Camborne Vean, and consequently it is in perfectly whole ground throughout the chief part of our sett; this discovery throws great light on our northern ground, and in our estimation renders the mine of greater value than before. We shall commence driving on this lode at the 12 fm. level forthwith, which is the most convenient depth for the present discharge of the stuff, and we shall lose no time in exploring our north ground, which holds out to us such a fair chance of speedy remuneration.

WHEAL SETON MINING COMPANY.

A meeting of adventurers was held at the account-house, on Tuesday, the 13th inst., when the accounts, having been presented and examined, were allowed: it was resolved, that a dividend of 15*l*. per share be made, and paid to the adventurers forthwith; and that the balance of 1966*l*. 15s. 4d., in favour of the adventurers, be carried to the credit of the next account.

Wheal Seton Account—October 13, 1846.

To amount of costs for July	£	890	15	11	
„ „ August (including bills)		2769	2	3	£3599 18 2
July 9—By amount of copper ore sold	£	4259	12	6	
Aug. 6— „ „ „		1422	6	2	
Blende sold in December last		30	11	1	
	£	5712	9	9	
Less 1-15th lords' dues		380	16	7	5331 13 2
Profit					£1731 15 0
Balance due from purser to end of June					1720 0 4
Making a total of					£3451 15 4
Deduct dividend of 15*l*. per 1-99th share					1485 0 0
Leaves balance in hand of					£1966 15 4

The following report from the agents, dated October 13, was presented to the meeting:—Bull's shaft is sunk to the 90 fm. level, and have commenced driving east at this level, on Bull's lode, which is 6 in. wide, and unproductive. In the 80 fm. level west, on the south lode, the lode is 4 ft. wide, composed of spar, mundic, and stones of copper. In the 70 fm. level west, on ditto, the lode is 8 in. wide, containing occasional stones of ore; 12 fms. behind this end there is a winze sinking, the lode is worth 30*l*. per fm., down 6 ft. In the 60 fm. level, west of ditto, the lode is 10 ft. wide, worth 40*l*. per fm.; the winze sinking below the 50 has been communicated to this level in the past week, the lode is worth 30*l*. per fm. In the 40 fm. level west, on ditto, the lode is 3½ ft. wide, of a very kindly appearance, and, we doubt not, will prove productive, being free from the slide by which it has been so long disordered. We have intersected the north lode at the 80 fm. level since our last account, and have cut into it 4 ft., orey throughout. In the 70 fm. level west, on ditto, we are carrying about 6 ft. of the lode, which is worth 80*l*. per fm.; 9 fms. behind this end there is a winze sinking, down 6 ft., the lode is worth 120*l*. per fm. In the 60 fm. level west, on ditto, we are also carrying 6 ft. of this lode, which is worth 80*l*. per fm.; the stopes in the back and bottom of this level are worth 180*l*. per fm. In the 50 fm. level west, on ditto, the lode is 4 ft. wide, worth 30*l*. per fathom. Tilly's shaft is in course of sinking below the deep adit, down 24 fms. 4 ft., ground more favourable.—P. RABEY; S. LEAN.

WHEAL HOPE LEAD MINING COMPANY.

A meeting of adventurers was held at the offices of the company, Old Broad-street, on Friday, the 1st of October.

WILLIAM ABBOTT, Esq., in the chair.

The CHAIRMAN briefly stated the object of the meeting, being that of suspending further operations, and urged the necessity of winding up the accounts of the company with as little delay as possible, by the immediate sale of all available effects, as well as the payments of back calls. Although the lode held out much promise (which was confirmed by Capt. Bray who was present), they were compelled in a measure to this resource, by the stopping of their neighbour, Wheal Catherine—the water-wheel having been erected conjointly with that company. He (the Chairman), much regretted the circumstance, as he had entertained a hope of their ultimate success; and he would suggest, for the consideration of the shareholders in each company, the propriety of those who felt inclined to continue the adventure, to amalgamate their interests, and unite in working the two setts under one company.

The SECRETARY read a statement of accounts, showing cost of mine from 23d October, 1844, to present day, 1057*l*. 14s.; and the amount received on calls, 889*l*.; calls unpaid, 135*l*.=1024*l*.: leaving the mine in debt, 168*l*. 14s.—The accounts were allowed and passed, and Mr. T. P. Thomas requested to write to all the defaulters, giving 14 days for payments—in default of which, Capt. Bray to take legal proceedings for their recovery. The operations of the mine are to be suspended, and Capt. Bray is to meet Capt. J. Middleton, to take such steps in reference to the disposal of the materials, as they shall deem most eligible, for closing up the affairs of this mine.

BUDNICK CONSOLS.—At a meeting of adventurers, held on the mine, on the 5th inst., the accounts were examined and passed; from which it appeared, that the balance from June was 96*l*. 2s. 3d.; cost for July and August, 1333*l*. 10s. 2d. =1429*l*. 12s. 5d.—By tin sold, 1309*l*. 11s. 2d.; carriage of tin, 20*l*. 4s. 11d; on account of call, 50*l*.=1379*l*. 16s. 1d.—leaving a balance of 49*l*. 16s. 4d.; from which deduct arrears of call, due 40*l*.—shows a balance against the mine 9*l*. 16s. 4d.

CONDURROW.—At a two-monthly meeting, held on the mine, on the 13th inst., the accounts were examined and passed; from which it appeared, that the cost, for Aug. and Sept., was 530*l*. 4s. 5d.; merchants' bills, 142*l*. 0s. 3d.; lords' dues, 32*l*. 14s. 11d.; balance due to purser end of July, 596*l*. 19s. 10d. =1301*l*. 19s. 10s.—Credit by ores sold, 654*l*. 19s. 6d.; call of 5*l*. per share, 640*l*.; sundries, 4*l*. 5s. 0d.=1299*l*. 4s. 6d.—showing a balance against the mine of 2*l*. 14s. 11d. The next account meeting was fixed for Tuesday, the 8th Dec.

CONSOLIDATED MINES.—At a meeting of adventurers, held on the mine, on the 18th ult., a statement of accounts was passed—from which it appeared, that the balance from last account was 1646*l*. 5s. 4d.; copper ores sold, 7578*l*. 15s. 7d.; tin, 378*l*. 18s. 9d.—9601*l*. 17s. 8d. Cost for July and Aug.: tutwork, 4180*l*. 16s. 10d.; tributers, 1646*l*. 9s. 10d.; merchants' bills, 2513*l*. 13s. 5d.—8341*l*. 2s. 1d.—leaving a balance in hand of 1260*l*. 15s. 7d.

EAST CARADON.—A meeting of adventurers was held at Webb's Hotel, Liskeard, on Monday, the 12th inst.—RICHARD FORSTER, Esq., in the chair.—The statement of the accounts was presented, showing a balance of 19*l*. in the purser's hands in favour of the company. Highly favourable statements were made by Capts. Puckey, Treleaze, and Whitford, in which they appeared unanimous as to the kindly and promising appearance of the lode; and the South Caradon main lode being now prosecuted under the most encouraging prospects, it was strongly recommended to commence more vigorous measures.—Capt. J. CLYMO (the manager) stated, that as the lode was also good in the back of the level, it was not improbable but that many thousand pounds worth of ore might be discovered in sinking from the surface, such having been the case in the adjoining mine (South Caradon). In the winze sunk near the present end, in the bottom of the level, a fine orey lode presents itself. The accounts were examined and allowed; a call of 1*l*. per share was made for the further prosecution of the mine; and an engine-shaft ordered to be immediately commenced on course of the lode over the winze recently sunk.

EXMOOR WHEAL ELIZA.—At a meeting of adventurers, held at Tavistock, on the 18th Oct.—present Messrs. Bullivant, Sleman, Square, Luscombe, Dunn, Bullivant, Jun., Flemank, Philips, Baron, Horswill, Wilkes, Snell, Palmer, Chant, Merrefield, and Job,—J. L. COLLEY, Esq., in the chair,—the accounts having been audited, and found to present a balance in favour of the adventurers of 237*l*., it was resolved that they be passed. The following report was read to the meeting from Capt. J. Prior:—I beg to hand you my report of the proceedings, with regard to work at this mine. Since I came, I first took a view of the ground at the surface, in order to ascertain whether or not it would be advisable, or advantageous, to sink a new engine-shaft, or to continue the old one—as far as I can at present judge, the old shaft must be resumed as soon as we can make it convenient. We are continuing to drive the cross-cut north at the adit level, to prove the north lode, which, I expect, 2 or 3 fathoms from the present end will do. There has been nothing done in the shaft since the meeting at South Molton, except I put the pump in order, and tried the water, which, I think, we can manage; but it is a useless expenditure of money, to attempt to sink, until we have a shed over the shaft, so as to enable the men to stand at the tackle, at all times, and weather. I have levelled the ground, to ascertain what levels can be had from the river to the wheel-pit, a distance of 150 fms.; this I have let at 1s. 10d. per fm.—the distance from the wheel-pit to where the water can be taken to go over a 25 ft. wheel, is about 600 fms. It will be necessary for me to know if 25 ft. is to be the height of the wheel to be put in.—It was resolved, that the report be entered into the Cost-Book; and that the captain be instructed to make the wheel 25 ft. in diameter, and as wide as the axle admits.

HARROWBARROW CONSOLS.—A meeting of adventurers, convened for Friday, the 9th inst., was held at Plymouth, John Peter, Esq., in the chair, when a resolution to the following effect was proposed and passed:—"That the meeting be adjourned to the 9th of Jan., 1847, or such other day as the purser may think best; such meeting to be held at Mr. Carne's, Bedford-street, Plymouth."

WHEAL BASSET.—At a meeting of adventurers, held on the mine, on the 5th inst., the accounts were allowed and passed, from which it appeared that the cost for July and August, was 1532*l*. 12s. 1d.,; merchants' bills, 585*l*. 19s. 3d. —together 2118*l*. 11s. 4d.—Copper ores sold, 2513*l*. 17s. 10d., showing profit of 395*l*. 6s. 6d., to which add balance of last account, 1263*l*. 19s. 8d.=1659*l*. 6s. 2d. from which deduct dividend of 5*l*. per share, 640*l*.—leaves balance at banker's 1019*l*. 6s. 2d.

WHEAL FRANCO.—The periodical two-monthly meeting of the adventurers, was held at the mine, on Wednesday last, the 14th inst., when a report of the finances was made by the managing committee, and also by the captain as to the state of the mine—both reports were considered satisfactory, and ordered to be printed, and sent to the shareholders. The appearance of the mine has much altered for the better; several parts of the lode, both in the 20, and 32 fm. levels have been left standing, the levels having been driven to the north of the lode; these parts of the lode are now being laid open, and are turning out a good quantity of ore. The floors are full of ore; and from the alterations made in the dressing department, the expenses will be much lessened; preparations are also making to dress over the waste, by the use of Brunton's patent belts, lately introduced for the dressing of tin ore. The engine-shaft is down 3 fms. below the 32; and as every thing is now in course, the sinking will go on by 9 men, without interruption.

WHEAL BUCKETTS.—At a meeting of adventurers, held on the mine, on the 5th inst., the accounts were examined and passed, and the loss of 875*l*. 12s. 10d. ordered to be collected forthwith.—Cost for July and August, 344*l*. 8s.; bills, 321*l*. 3s.; balance from last account, 1508*l*. 8s. 1d.=2173*l*. 14s. 1d.—By call of 5*l*. per share, 1280*l*.; tin stuff sold, 18*l*. 1s. 3d.=1298*l*. 1s. 3d.—showing a balance against the adventurers of 875*l*. 12s. 10d.—Mr. G. A. Knight, of Truro, was elected purser in the room of the late Mr. W. Gill; the agent's report was considered satisfactory, particularly respecting a new discovery at the 30 fm. level, in which the lodes in the ends both east and west, were represented as capable of turning out 3½ to 4 tons of ore per fm., worth 7*l*. per ton.

[ADVERTISEMENT.]

MINING IN SPAIN—MR. COWARD AND CAPT. O. H. MATTHEWS.

"It is not well for those who live in glass houses to throw stones."

SIR,—I am told that there is an article gone, or going, to your Journal, in which I am torn up root and branch. The authors (for it seems there are more than one) accuse me, among other things, of not having given proofs of bad management, and a want of judgment, and that my motives will not bear investigation, &c., &c. My jurors on these points is the mining world, on whose dictum I am content to stand or fall, and the sooner the better. If I wait for your next Journal, a month must pass ere I can receive and answer the said promised attacks—*a month is too long*—I will, therefore, not wait; but will forestall a little, and, perhaps, make my defence more easy, and, I hope, victory more speedy and complete.

I begin with San Estevan Mine, from which Capt. O. H. Matthews has sent 55 tons of his lead ore to England at a serious cost, and when there it would not sell; he says, in his letter of the 6th of December, 1845—"That the mine is paying its monthly costs, and yielding a surplus profit equal to the large amount of capital expended." *Query*—How can a mine pay its cost, and yield a profit from ore that will not sell? And in your Journal of the 20th of September, 1845, Capt. O. H. Matthews says—"I have now a *rich lode of lead ore, upwards of five feet wide.* *Query*—What has he done with this rich course of lead ore, as he calls it? In his report of October he states—"I have left some very rich work in sight, from which I look for *regular returns.*" *Query*—What is become of this rich work? and where are his "regular returns?" I say, Mr. Editor, that if he had this rich lead ground in sight, he ought to have raised and dressed therefrom LARGE AND SALEABLE parcels of ore, which would have proved his judgment. Capt. O. H. M., in his letter to me of the 8th May, states—"I have a *lode* in the adit upwards of 3 ft. wide, and of good promise." *Query*—Would a competent miner *call common clay* a lead lode, and of good promise? *Query*—Is it good mining to lose 12 ft. of level in an adit end? and *query*—Would a good miner run the risk of gaining 12 ft. of level in driving an end? *Query*—Is it competent mining to sink, close timber, and divide an engine-shaft, before you know whether you have a lode, or how a lode is running or underlaying?

Query—Would a practical miner drive in an unknown country five cross-cuts, from a shaft only 26 fathoms from surface?

Query—Is it mining judgment to sink a shaft 12 fms. in a lime rock, when there is no lode near it, nor the possibility of a level reaching it?

Capt. O. H. M. refers to his working plans and sections to prove his competency as a miner. Now, if he was a competent miner, he would have known that such sections and plans clearly prove that the work done is altogether unminerlike—on this point I am ready to meet him.

Capt. O. H. M. broke the greater part of his ground, and took away the greater part of his ore, ON OWNERS' ACCOUNT, and thereby paying at least double price for the former, and rendering worthless the latter. *Query*—Is this good mining?—*In my opinion, it is not good mining.* The only safe—I think the only safe—course, which an agent can, or ought to, pursue, to secure *dispatch, economy, and general satisfaction*, IS TUTWORK AND TRIBUTE; to do that work, I had the pleasure of handing over to him 25 as good miners as Cornwall could produce. Had any one of them been the manager, instead of Capt. O. H. Matthews, they would have gained a large profit, whereas THE ALL-COMPETENT MINER HAS LOST 4000*l*. I shall hereafter say something more on San Estevan Mine. If I can obtain a sight of the general costs, I will place each item of expenditure under separate headings, and hand them to my jurors, through the *Mining Journal*.

I now ask, if the competent miner showed judgment, by giving the tailor at Colonga 5000*l*., and agreeing *to one-fifteenth of the produce*, &c., &c., for and in a concern in which there WAS NO LODE? *Query*—Would a competent miner call a common stratification a promising *copper lode*, 80 ft. big or wide; he speaks thus of it—"I traversed over the back of a large and most extraordinary looking LODE, composed of gossan, quartz, mica, talc, flookan, iron, and arsenical pyrites, yielding rich specimens of yellow and black ORES, with native copper."—*Vide* his report in the *Mining Journal*, August 10, 1844; there I am told the loss has been near 2000*l*. I will not *at present offer any further proofs* as to a want of judgment in working, &c., &c., of lead, or copper mines. I now go to the CINNABAR Mine—here Capt. O. H. Matthews declared, in March, 1845, that he has ore IN SIGHT worth 4000*l*.; since which he has been working, say, 15 months, with a large pare and a heavy cost, and the whole ore raised is only valued at 2000*l*., WHICH MAY PROVE TO BE LIKE HIS LEAD ORE, NEARLY

worthless. *Query*—Would not a Cornish buddle boy have been a better judge of his ore in sight than the competent miner?

Now, a word or two on his competent coal mining judgment—near Infiesto, he drove a cross-cut 17 fms. into a hill, and then did not reach his seam of coal, and left it without proving anything, except throwing away 50*l.* to 60*l.*—*Query*—Would not the practical collier have taken up his level at the "out crop," where there is 8 feet of good coal, and have driven for proof on the seam, particularly as the out crop is 25 feet below Capt. O. H. M.'s cross-cut?

I am fully aware, that these matters are uninteresting to many of your readers; and to me they are only pleasing, so far as they uphold truth, or give information to parties interested in the affairs. Mr. Editor, I conclude by assuring you, that I am thankful for your independence and prompt insertion, and for which I HEARTILY regret the necessity. I have little time and less inclination for such matters; but I am not to be terrified by the parties who have, and are, attacking me without cause—

"And though I hope not hence unscathed to go,
Who conquers me will find a stubborn foe."

Gijon, Asturias, Spain, Sept. 28. NOAH COWARD.

SHARE JOBBING IN TAVISTOCK—WHEAL ELIZA.

SIR,—I should not again have troubled you, or the public, but that Mr. Sleman's letter demands a word or two of explanation from me. Why he supposes "the chagrined and disappointed speculator" to mean him, is best known to himself; I can only say, I never for a moment thought that he was the author of the letter signed "Fair Play;" that epistle, in my opinion, bears sufficient internal evidence to the contrary. I carefully avoided personality in my letter; I did not say "Thou are the man!" and it would have been time enough for Mr. Sleman to have taken it to himself, had he been the only speculator in Tavistock, or sole proprietor of Wheal Eliza. As to assassination, he seems to hold very singular notions on the subject; I never knew before that it was wrong to "do *good* by stealth." But *the Exmoor bubble*—ay, there's the rub—and for this unguarded expression I feel it necessary to make an apology, after the very voluminous evidence Mr. S. has brought forward to prove the contrary. Observe the good doctor's delicacy, in changing the name from *Maria* to Eliza, lest any unfortunate should be duped into the purchase of a share, by the talismanic influence of the former; but, "What's in a name?" after the 150 Cornish captains and the 68 Devonshire ditto (Mr. Sleman will forgive me, if my arithmetic is wrong, for I have not his letter before me), and the dozen and a half of Mr. Hitchins's agents, have pronounced Eliza "all that fancy painted her"—by-the-bye, he has omitted to give the world the opinion of the "mining king" as well. I shall conclude by asking the doctor one question—Does he not know some one who has *resided at home*, to whom the simile of Tantalus will bear a closer resemblance, than to— X. X. X.

Gunnis Lake, October 14.

SIR,—It was with some surprise I observed, in your Notice to Correspondents, that my letter, addressed you last week, you declined to insert on the score of personalities, at the same time that you *indulged* another correspondent with the insertion of his letter on the same subject; this is not dealing fairly with your correspondents, as I felt it was only due to myself to give "X. X. X." to understand, that I was not the Exmoor Wheal Maria holder. I think, however, that Mr. Sleman has gone beyond what was necessary, as he could not be implicated by any remarks of mine. I have only to observe, that, should the "Mining King," or his "satellites," require any details being given as to the "moves" by the Tavistock clique, I shall be most ready to furnish them. All I ask is a "fair stage and no favour;" as my signature is only in accordance with my feelings, and my name not unknown to you, I have no hesitation in requesting the insertion of the present in your next Number. FAIR PLAY.

London, Oct. 15.

[We must now conclude this correspondence. Each party has had an opportunity of expressing their opinions; and further letters on the subject can only appear as advertisements.]

TRELEIGH MINING COMPANY—DIVIDEND.

SIR,—In your report of the Treleigh meeting in the last *Mining Journal*, I observe you have fallen into a very important error, relative to the answer given by the chairman respecting the payment of a dividend. My question to the chairman was, after considerable discussion had taken place in reference to this subject (the accounts showing a balance in hand of 1570*l.*)—can the directors say when the proprietors may expect a dividend, supposing the returns to continue as favourable as they have been for the past few months? To this the directors could not give any assurance. I then asked the chairman, if they would give an assurance to the proprietors that they would make a dividend as soon as they had a balance in hand of 2000*l.*?—To this proposition the directors fully consented. Whereas your report makes the chairman to say, that he considered there should be in the hands of the company a surplus of 1500*l.* or 2000*l.* over and above the amount required for the dividend. I trust, Mr. Editor, that you will see the importance of correcting an error, that I have no doubt has inadvertently crept into your report, by inserting this letter. T. SMITH.

Throgmorton-street, Oct. 14.

MINE ACCIDENTS.

Wheal Concord—J. Irwen, who was employed in the 10 fm. level, having finished his work, was in the act of coming up in the kibble, when the rope broke, and the kibble struck him on the head, causing instant death; he has left a wife and five children: the son was working in the same place at the time.

Rounds Green Colliery.—A boy, employed here, was literally cut in two, in consequence of his own wilfulness: he would persist in riding on a flat chain, which wound round a drum-barrel, jumping off when he was carried near the drum; the engineer drove him away; but during the man's absence, he returned, got on the chain, and, neglecting to jump off in time, was carried round the drum; his body was almost severed into two parts.

Lord Belhaven's Colliery, Wishaw.—W. Lindsay was killed while working.

Wigan.—P. Carroll was killed, by falling down a colliery in Platt-lane.

Walker Iron-Works—Dreadful Explosion.—A serious and fatal accident occurred at the Iron-Works of Messrs. Losh, Wilson, and Bell, on Monday last, by which three persons have lost their lives. It appears to have arisen from an accumulation of foul air in the reservoir, from which the pipes lead to the blast machinery; some derangement having been discovered, the men were endeavouring to regulate it, and in the act of plugging a hole in one of the pipes, when the explosion took place. One man was killed on the spot; and another man and a boy were found at the bottom of a staircase, leading to the privy, suffocated by inhaling the carbonic acid which had escaped after the explosion. The coroner adjourned the inquest, to enable a thorough investigation to be made; considerable damage was done to the property.

Haigh Moor Colliery, Stanley-lane End, near Wakefield.—An explosion of fire-damp took place here, by which three men lost their lives; the property is owned by Messrs. Hudson and Co., of Leeds.

Risca Colliery.—A miner, named Fatfield, was killed by a fall of coal.

South Cavadon.—J. Cock was killed by falling from the 90 to 100 fm. level.

Spath Bottoms Colliery, Castleton.—W. Hanson was burned by fire-damp.

Moseley Hole Colliery.—A little girl, who had been sent with her father's breakfast, thoughtlessly laid hold of a pit chain, which was worked by an engine, in order to have a ride. Before the little creature was aware of her perilous position, her clothes got entangled in the chain, and she was carried over one of the pulleys which support it, and was dreadfully injured.

There are now seven collieries being opened in the Rhondda valley, four of which have struck into the coal. There are also three other collieries about to be opened in the Rhondda-fach valley, where the seams are of first-rate quality—the same as Powell's Duffryn steam-coal, and the quantity contained in them is almost inexhaustible. When these works come into full action, employment will be given to many hundreds of additional hands; and they will prove a great source of wealth to Pontypridd and its neighbourhood.—*Merthyr Guardian.*

FORCE OF IMAGINATION.—Mr. De la Haye, a British subject, of French extraction, proposes *the formation of railways under the sea, between India, China, and London.*—*Monmouthshire Merlin.*—[Our clever contemporary must have been dreaming since reading, in the *Mining Journal* of the 26th Sept., a description of Mr. De la Haye's proposition, for the construction of a submarine railway from Dover to Calais—in which article, Mr. De la Haye merely expresses his belief, that, by-and-bye, a daily communication will be established between China, India, and London, *by means of the electric telegraph!*—not by railways.]

THE UNIVERSAL GAS BURNER.—In the *Mining Journal* of 30th of May last under the head of Institution of Civil Engineers, we gave a short description of this burner, which had just been introduced into the theatre of that establishment: we have since had an opportunity of inspecting the principle more closely; and we confess it appears to us superior in brilliancy, and freedom from that great evil of most of the burners commonly used—allowing quantities of unconsumed carbon to pass through the flame, to the great injury of delicate fabrics, bronze, gilding, plate, jewellery, &c. To those who are aware of the cause of *two* colours in the flame of a gas burner, it will be a convincing proof of the success of this application of the best principles of combustion, to say that the flame is *quite white* down to the orifices from which the gas escapes—showing, whatever minute particles of uncombined carbon may be carried through the burner, they are here entirely consumed; and thus the only gaseous products evolved are carbonic acid, and the vapour of water, quite innoxious to furniture or ornamental work. The orifices on the circular plate of the burner are extremely minute; and a tube passes up the centre, conveying a stream of atmospheric air to a conical chamber, about an inch above the burner, and which is pierced with numerous holes, through which it impinges on the centre of the flame, and by its force carving it out into the shape of a tulip, and greatly aiding in the perfect combustion. From experiments which have been made at the Polytechnic Institution and the Adelaide Gallery, with Professor Wheatstone's photometer, the results were a far more brilliant light, and a consumption of only two-thirds the quantity of gas required by other concentric ring burners. The principle on which this burner is constructed is truly scientific; and, we doubt not, it will meet with that demand to which its economy and advantages so justly entitle it.

MINING IN SOUTH AUSTRALIA.

We have received the *South Australian Gazette* of the 16th May, which gives us information of a later date than hitherto published—it is the news for the week then ended: we quote the particulars as they appear in our contemporary, as showing what important progress mining is making in that distant colony, and the interest attached thereto:—

The accounts from the Burra Burra are more favourable than ever; and it is expected that the fine weather, during the week, will permit the carriage of the ores to Port Adelaide to proceed as usual. It is stated that there are about 1000 tons at the mine ready; and from the great attention that has been recently paid to the workings, as well as to the security of the shafts and galleries, an immense quantity of the finest ores could be got out whenever sufficient opportunities for shipment occur. The Princess Royal Mines are now turning out fine ores in considerable abundance.

Of the Kapunda and Montacute we have only to report that they are proceeding steadily as usual—the ores in both improving in quality. The *Mary White* is loading Kapunda ores for Swansea direct.

The Mount Barker Mines are daily improving; and ores have been discovered in various portions of the survey, at a considerable distance from the present workings. The South Australian Company's miners are driving shafts through one of the hills where the lodes are most promising, and are raising from the lodes near it a fair supply of excellent ore, about 130 tons of which have been sent to Port Adelaide.

From the Victoria Gold Mine we have no particular report, except that the qualities turned out within the last fortnight have been less than was anticipated by the shareholders. Rich lodes of copper are reported to have been opened on the section recently purchased by Messrs. Castles and Gwynne, near Makgill. As this mine is not more than five miles from Adelaide, its value is likely to be much enhanced by the comparatively small expense of carriage to the port.

From the lead mines we have no report. The English Company formed to work the Glen Osmond Mine is shortly to commence operations on an extensive scale. It is believed that the difficulties in the way of arranging the grant of the special survey, at the Reedy Creek, taken by the local directors of the London Mining Company, have been overcome; and that the land grant, with the reservation of royalties, will be provisionally accepted—leaving the question as to their ultimate imposition to be settled between the Colonial-office authorities and the London directors of the company. The correspondence between the local government and the managers at Adelaide is said to be *unique*; and we trust that it will soon find its way to the public.

A special survey, in some locality not generally known, in the far north, is much talked of; but as scarcely a day elapses without some fresh accounts of surveys and new discoveries being circulated, we cannot undertake to say whether or no the report is well founded. This forenoon, at 11 o'clock, the mineral sections around the Montacute are to be finally sold. Large prices are expected, and the attendance is sure to be numerous.

SPONTANEOUS COMBUSTION OF NEW ZEALAND ORES.

Dr. F. Campbell, of 275, Castlereagh-street, Sydney, in a communication to the *Sydney Morning Herald*, in reference to the spontaneous ignition of copper ore during its conveyance to Sydney from New Zealand, by the ships *British Sovereign* and *Regia*—[the particulars of which appeared in the *Mining Journal* at the time]—thus describes the ore in each, which he had separately assayed—using what is called the *moist method*:—

100 GRAINS COPPER ORE—*per Regia.*

Sulphur	51·29	Iron	36·54
Copper	10·67	Ore insoluble in nitric acid	1·50—100·00

100 GRAINS COPPER ORE—*per British Sovereign.*

Sulphur	47·78	Iron	39·38
Copper	6·84	Matter insoluble in nitric acid	6·00—100·00

After describing the usual causes of spontaneous combustion, and the particular circumstances attending it, he proceeds to certain known facts connected with the actual inquiry. He says—"In the case of the *Regia*, the ore under consideration was very damp when shipped, and new casks of oil were stowed above it; and these circumstances of themselves were extremely favourable to the production of heat. In conclusion, I would strongly recommend the speculators in copper mines, whether of New Zealand, or any other of the countries of Australasia, to have the ore at least roasted before consigning it, by ship, to any distant region. It will then be free from all possibility of occasioning danger, either to the general cargo or to human life. There is every convenience and every means at hand in New Zealand for this purpose; but I would not stop here, if the metalliferous veins should ultimately turn out rich—I would reduce the ore at once. You will generally find, that, where copper and iron ores abound, Nature has also furnished, in the same place, plenty of coal to smelt them. For example, the anthracite of the Hunter and Lake Macquarie is the best possible coal for this purpose; and it is very probable the same kinds exist abundantly in New Zealand. Thus, I say, every convenience for submitting to all the eight processes through which it must pass to reduce it to pure copper is at hand—and why not employ them, and send the copper home in the metallic state, by which a fortune might be saved in freight, &c."

ASTONISHING FACT.—Notwithstanding the progress of railways, and the great transfer of locomotion to them from the metropolitan turnpike-roads, the Surrey and Sussex roads have been just leased to Mr. Jonas Levy, at 30,250*l.* per annum—being an increase of 1350*l.* on the previous year, and the highest amount they have ever fetched.

THE COAL TRADE.—The coal trade is now in a very brisk state in the collieries belonging to the great owners. Lord Londonderry's pitmen in his extensive works are all so fully employed that they work three days overtime in the fortnight, and the pitmen of the Earl of Durham, the Hetton, Haswell, and South Hetton Companies, are all working overtime. Since the suspension of the vends' regulations, the trade is falling chiefly into the hands of the large owners, as the small collieries cannot compete with their opulent rivals, and the former nominal monopoly, as it was termed, is likely to be a monopoly in reality. The prices have greatly improved in the markets, and the price has been raised at the shipping ports. Freights are steady, and ships fully employed without leaving any great profit to their owners.

THE COAL TRADE.—We are informed, that considerable quantities of coal from the east are now exported at Maryport, to Ireland, and even to some of the western ports of Cumberland. The demand appears to be entirely regulated by the quality, which is, we believe, the direct cause for the produce of the Blenkinsopp Colliery being conveyed by the railways to the shipping port of Maryport—a distance of 48 miles; and even that of the Mickley Colliery, near to Newcastle—a distance of not less than 77 miles. We have heard also, that rumours are prevalent amongst the coalowners, that Ireland will eventually derive its coke from Newcastle, and the collieries between that town and Carlisle, which must prove of great importance to the railway.—*Carlisle Patriot.*

COMBARTIN SMELTING WORKS.—Last week another plate of silver was sent to market, weighing upwards of 2100 ozs., and valued at 550*l.* We believe this is the ninth plate which these works have yielded since their formation, a period very little exceeding 12 months. It is very gratifying to the promoters of these works to witness the good which they are achieving, and are likely still further to accomplish, in giving extensive employment, and in promoting the general interests of the locality, by the large returns which they make, in carrying on their spirited undertaking.—*Cambrian.*

NEW FULMINATING MATTER.—The *Messager* states, that "a trial of a fulminating matter having all the appearance of cotton and wadding, and which the inventor, M. Morel, a mechanical engineer at Paris, designates under the name of fulminating cotton, has lately been made in presence of Gen. Gourgaud, President of the Committee of Artillery; Col. Piobert, member of the Academy of Sciences, and several other officers. M. Morel announced that he had, during a long time, been occupied with his invention, and that he had taken out a patent for the preparation of the composition, which he submitted for trial. For this purpose, he presented a box of cartridges ready prepared for small arms. Burned on the hand it causes no sensible pain, leaves no stain, and produces no smoke. Dipped in water and pressed, and afterwards dried between two leaves of blotting paper, it preserves its fulminating properties. Gen. Gourgaud fired a charge of fulminating cotton from a fowling-piece, 40 yards from the object at which he aimed. He fired a holster pistol at a distance of 25 yards, and a pocket pistol at a distance of 10 yards. At 40 yards, a ball from the fowling-piece traversed a plank of beech of 0·35 centimetres thickness; at 25 yards, the ball from the holster pistol lodged in the plank without perforating it; the ball from the pocket pistol made the same impression on the plank as that which might have been produced by a charge of ordinary gunpowder. The charge of fulminating cotton leaves scarcely any residue in the barrel. The recoil of the gun is extremely slight, and the report is not louder than that of a large detonating cap. We cannot calculate on the effect which may be produced by this discovery. He has promised to prepare a quantity of fulminating cotton sufficient to make experiments with cannon. The effect already produced appears to coincide with those attributed by the English journals to the cotton powder of M. Schonbein. M. Chodsko, a Polish refugee, likewise presented a fulminating substance, which has the appearance of cotton, and which was tried with an artillery musketoon, fired at 40 yards. The ball produced the same effect as that fired by fulminating cotton, but it left a considerable deposit in the barrel. The cotton powder of M. Chodsko was compressed into wadding, in order to charge the gun, whilst the fulminating cotton was not. Both materials ignite by the blow of a hammer on an anvil, but not by the blow of a hammer on wood."

IRON SHIPS.—The loss of the *Great Britain*, for we may now assume that the ship will never quit Dundrum Bay, has demonstrated the superiority of iron vessels. It has been said that the compasses are liable to inaccuracy in iron ships. Capt. Claxton in his report on the accident to the *Great Britain* says—"The compasses were *perfectly correct*, and the ship herself so strong, as to defy, hitherto, shocks from rollers and seas at high water, which, in my humble opinion, would by the end of last week have *broken up the strongest wooden ship that ever was built.*" Few persons acquainted with the locality where the *Great Britain* is stranded, and the seas running on that coast for some time, will hesitate to adopt Capt. Claxton's opinion. The attempt to get the ship off is now for a time abandoned, without sanguine hopes that it can be successfully renewed. The loss is ascribed to the omission of St. John's Lighthouse from the Chart. It is impossible to estimate the amount of property, or the number of lives that may be sacrificed by the same omission, which seems to render a supervision by Government of all nautical charts absolutely necessary.—*Glasgow National Advertiser.*

ON THE RESULTS OF AN EXTENSIVE SERIES OF MAGNETIC INVESTIGATION, INCLUDING MOST OF THE KNOWN VARIETIES OF STEEL.

The following is an abstract of a paper, which was read at the British Association, at Southampton, by Mr. W. Petrie:—

Process of manufacture to produce permanent Magnets, having the greatest fixity and capacity conjointly secured:—1. The original iron should be the purest soft iron, *charcoal made* (not coke); the Swedish, from the *Dannemora* Mine, is better than any other.—2. Converted: with pure *charcoal*; it should be carbonised *lightly*, and the process to be stopped when the bars, of the usual thickness, are "*scarcely steel through*," yet so that it will harden with certainty, without an undue heat.—3. Sorted: with attention to homogeneous conversion, &c., according to the ordinary rules.—4. Melted: the pot kept covered, and not longer than necessary in fusion.—5. Cast: into a large ingot, so as to allow of its being *well* rolled out singly, before it becomes reduced to the requisite thinness.—6. Rolled: while hot from casting, to save a second heating; it should not be doubled over, nor sheared and faggotted; the rolling should be conducted at as low a temperature as convenient, as it thereby acquires a harder, closer texture, and finer grain.—7. In cutting into shape, the substance (if large or of varied form) should not be strained, as by boring with "*rymers*," or straightening, oftener than is unavoidable, with the hammer, as it is then apt to warp, and to have unseen commencement of cracks on becoming subsequently hardened. More carbonisation than that previously described as best is of little injury to the magnetic goodness of the steel, provided it be so prepared as to preserve a homogeneous and *white* appearance of fracture when hardened, which is not so easily managed as with that of lower carbonisation; but if it be again carbonised *more* than usual (as razor steel, or above that), it rather improves; and again an increase deteriorates it as in cast-iron, and a further increase again improves it—in short, *in the scale of carbonisation there is a succession of continually decreasing maxima of advantage.*

On the physical properties which the Steel should possess.—The fineness of grain is affected by many adventitious circumstances, which must be considered and allowed for in judging of it; and the most important fact is the difference between the appearance in the *hard* and *soft* states; for in the general properties, whether optical, mechanical, or magnetical, their order, in any set of samples, is *reversed* in the hard state, independently of the absolute change in each property. The steels should be examined by breaking with a *single* bend at a file notch (notching with a chisel, bending back, &c., change the appearance). A microscope of 6 or 10 lineal power is better than any other power for examining it. The *general* properties, without going into detailed description, should be as follows—the terms being comparative with other samples of less value, and not all with the hard or soft states of the same steel:—

	IN A SOFT STATE.	IN A HARD STATE.
General appearance, uniform darkish grey.	Uniform white.	
Rather a large grain, compared with razor steel (or finer, if much rolled).	A smaller grain than it was before.	
Rather irregular in size and shape of grain, unless fine. Rounded crystallisation.	Rather more regular than before. Rounded crystallisation disappears. Grains individually distinct, with gold metallic lustre.	
Close texture, without cavities.	Not particularly close.	
Rather tough for steel.	Brittle, and very hard.	
Attracted considerably before magnetising.	Ditto.	
Loses induced magnetism more freely than other steels.	*Retains* magnetism well, and abundantly.	

Care must be taken to discriminate between real cavities and indentations arising from the crystals being torn up by the breaking; pure iron often appears porous from this cause. Then followed some peculiar considerations on the chemical constitution and molecular arrangement of certain sorts of steel; and on the molecular peculiarities of iron and other metals, in connection with their magnetic capacity, illustrated by a tabular arrangement.

On hardening, &c.—In the ordinary process there is risk and difficulty for large work, owing to unequal heat, unnecessary time and heat applied, especially to fine edges, decarbonisation, scaling, &c. These are obviated by a process which is new, as applied on a large scale—namely: heating in melted lead. It will be observed, that the *precise* heat is imparted, quite uniformly, in half a minute or so; and the finest edge is heated momentarily no higher than the thickest part, rendering this process incomparable for all instruments, where it is the edge or smaller parts that are of importance. *No scale is formed*, the finest polish or sharpest edge being preserved through the hardening. The previous preparation of the steel and some other points are described; and particulars of the manner of refrigeration in water (salt), and for securing hardness and great evenness, are also detailed. The process has been applied to steel sheets of 10 inches by 20, obtained quite flat, and as hard as a file throughout, even at the middle parts, which has hitherto been found very difficult—we may say, impossible. Magnets, prepared by these means only, differ generally in magnetic power by $\frac{1}{10}$th part, many being absolutely equal. Particulars are then given of the advantage of certain high powers for magnetising bars, and of an apparatus constructed, weighing 2 cwts., and possessing nearly as great aggregate power as the colossal magnet in possession of the Royal Society, weighing, we believe, 2 tons. A method is suggested for verifying the constancy of magneto-meteorologic instruments, by means of the terrestrial magnetism itself, independently of its own variations, or of the comparison of the mutual action of three or more bars.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Twelve o'clock.

Bank Stock, 7 per Cent., 206½	Belgian Bonds, 4½ per Cent., 97½ 8
3 per Cent. Reduced Ann., 93⅞	Dutch, 2½ per Cent., 59½
3 per Cent. Consols Ann., 96½	Brazilian, 5 per Cents., 84⅝
3 per Cent. Annuities, 94⅛	Chilian, 6 per Cents., —
3½ per Cent. Ann., 99⅝	Mexican, 6 per Cents., 23½ ½ all to pay
Long Annuities, 9¼	Spanish, 5 per Cents., 26⅝
India Stock, 10½ per Cent., —	Ditto Deferred, 17
3 per Cent. Consols for Acc., 95½	Portuguese, 4 per Cents., 41
Exchequer Bills, 1000*l.*, 14, 13 pm.	Russian, 5 per Cents., 110½

MINES.—The amount of business done has not been extensive during the past week; but there are signs of an improving market: shares have, in several instances, maintained former quotations, whilst a few have advanced; amongst those in which business has been done, we may name—Stray Park, Cullington, Trelawney, Franco, Devon and Courtney, Concord, Kirkcudbright, Trewallack, West Trethellan, Tamar, West Wheal Jewel, South Francis, and South Trelawney, Trehane. The mining share market in Tavistock has been dull, and but few shares have changed hands—those are Tavy Consols, Wheal Carpenter, Wheal Franco, and West Wheal Friendship: much interest was excited by the meeting of the shareholders in that town, on Tuesday last, reported in another column, when every adventurer in the neighbourhood was present, with one exception. We learn, by this morning's post, that transactions have taken place in Cornwall—in Holmbush, at 10; North Pool, 55; South Wheal Francis, 160; Tamar, 5; Trewallack, 15½; Thicroft, 10; Ting Tang, 10; West Trethellan, 30; West Wheal Seton, 50; and Wheal Buckets, 25.

RAILWAYS.—After the unprecedentedly inactive state of the share market, during the week ending the 10th, which we noticed in our last number, we are happy to say, that a reaction took place on Saturday last, and which has since been supported: orders to buy have been received by the brokers to a greater extent, we may almost say, than for months past; and most kinds of stock, which had been so depressed in the previous week, have, with few exceptions, regained their buoyancy. On Wednesday, foreign securities rather tended to a decline; and a sudden and unlooked-for depression occurred in the share market generally, owing to the fall in the consol market. On Friday, however, prices again rallied, and the market assumed a firm and healthy appearance, which, up to last night, had not been disturbed.

MEETINGS.—*Cambrian and Grand Junction*: under Lord Dalhousie's Dissolution Act; 12,575 votes for dissolution, without bankruptcy; for bankruptcy, 230, majority to dissolve without bankruptcy.—*Warwick and Worcester*: under dissolution; 7740 votes present, and a majority of 4970 for dissolution, without bankruptcy.—*Sligo and Ballaghlin*: for dissolution; 2760 votes for dissolution, without bankruptcy.—*Chester and Birkenhead*: an adjourned meeting; at which the negociations for the sale of the line to the North-Western Company were set aside.—*Irish Lines*: several deputations have waited on the Lord Leintenant, for permission to appropriate a portion of the funds raised at Baronial Session, under the Labour Act, to the purposes of completing or carrying on the railways; but in each case his Excellency expressed his conviction of the benefits which would arise from such course, but feared the obstacle would be in getting the Treasury to agree to it; the memorials would, however, be sent to the Treasury.

LEEDS, FRIDAY.—There has been rather more firmness in the share market during the week, and a better business has been done; yesterday and to-day, however, prices have not been so well supported, and sellers are again beginning to preponderate. Ormskirks are firm at 3*l.* East Lancashires, old and new, are quiet, the former at 3¼ prem., and the latter at 2¾ prem. North Staffords have declined from 2½ prem. to 1½ prem. Matlock's from 16s. to 10s. since Monday. In the present uncertain state of public affairs, we can hardly look for any permanent improvement in shares. TOOTAL, BARFF, & PLINT.

HULL, THURSDAY.—The share market, with a slight change for the better at intervals,

remains dull and depressed. An infinity of reasons are assigned for this; but we are inclined to believe that the large *amount of stock* held by parties, whose chief operations are in shares, will be found a better key to the present dullness than any want of confidence in the ultimate well-doing of the lines. This fact is certainly of more consequence than the general ones of the "potato crop," "Spanish marriage," &c. If dealers look over the amount of stock they hold, and consider how much less frequently they give orders to the brokers, the state of the market will create no more surprise than is natural in those who hold shares, which, as a matter of course, they think *ought* to advance.

RAILWAY SHARE LIST.

RAILWAYS.	Paid	*Closing pr. last week.*	*Closing pr. last night.*
Aberdeen	£20	14¼	15
Amber, Nottingham, Boston, and Erewash Junction	2½	2	2¾
Armagh, Coleraine, and Portrush—25l. shares	1½	¾	¾
Birmingham and Gloucester—100l shares	100	127	128
Birmingham and Oxford Junction—20l shares	2	4½	5¾
Bristol and Exeter—100l shares	75	82	82
Bristol and Gloucester—50l. per share	30	50	50
Caledonian—50l per share	25	20½	21½
Chester and Holyhead—50l shares	27½	23½	23¾
Direct Northern—50l shares	2½	1½	1½
Eastern Counties—25l shares	14¾	21½	21¾
East Lancashire, 25l. shares	14	17½	17¾
East Lincolnshire	1½		
Edinburgh and Glasgow—50l shares	50	70	70
Edinburgh and Northern	10	10	10
Edinburgh and Perth	3	1½	1½
Exeter, Yeovil, and Dorchester—50l shares	5¼	1½ dis.	1¼ dis.
Goole and Doncaster—20l shares	4½ s	¾ dis.	¾ dis.
Grand Union (Nottingham and Lynn)	1½		
Great Southern and Western (Ireland)—50l. shares	27½	31	29½
Great North of England—100l shares	100	233	235
Great Western—100l shares	85	135	137
Guildford, Fareham, and Portsmouth—50l. shares	5		—
Hull and Selby—50l shares	50	106	107½
Lancaster and Carlisle—50l shares	45	57½	60¼
Leeds and Bradford	30	74	74
Leeds and Carlisle	2½		
Leicester and Birmingham—20l shares	2½ s	¾ dis.	½ dis.
Leicester and Bedford—20l shares	2½ s	¾ dis.	¾ dis.
Leicester and Tamworth—20l shares	4½ s	¾ dis.	¾ dis.
Liverpool, Manchester, and Newcastle Junction	2½	1¾	1¾
London and North Western	stock	195	195
London and Blackwall	Av. 16l 13s 4d	9½	9
London and Brighton—50l shares	50	58½	59½
London and Croydon	Av. 13l 15s 9d	21½	21½
London and Greenwich	Av. 12l 15s 4d	9½	—
London and South Western	Av. 41l 16s 10d	67	69
London and York—50l shares	2½	1¾	1¾
London, Salisbury, and Yeovil—50l shares	2½	1	1
Londonderry and Coleraine—50l shares	12½	1¼	5¼
Lynn and Ely—25l. shares	15	15¼	15
Lynn and Dereham—25l shares	15	12	12¾
Manchester and Leeds—100l shares	82	101	101½
Manchester and Birmingham—40l shares	40	74	72½
Manchester, Buxton, and Matlock—20l shares	4½ s	¾ pm.	½ pm.
Manchester and Southampton	2	1½	1
Midland	Stock	130	134
Ditto Birmingham and Derby	Stock	109	110
Newcastle and Berwick—25l shares	15	25½	25
Newark, Sheffield, and Boston—25l shares	2½	—	—
Norfolk	Stock 100l	131	133
North British—25l shares	25	32½	33¼
Northern and Eastern—50l shares	50	70	71
North Kent and Direct Dover—50l shares	2½		
North Staffordshire—20l shares	4½ s	1½ pm.	1½ pm.
Oxford, Worcester, and Wolverhampton	12½	6¾	6¾
Portsmouth Direct—50l shares	3½	¾ pm.	4½
Preston and Wyre—25l shares	25	32	30¼
Richmond—20l shares	15		
Scottish Central—25l shares	12½	18	18¼
Scottish Midland—25l shares	12½	10½	10
Sheffield and Manchester—100l shares	100		
Shrewsbury and Birmingham	3	3	3¼
South Devon—50l shares	35	33	31
South Eastern and Dover	Av. 33l 2s 4d	37½	38¾
South Midland—20l shares	4½ s	1½ dis.	1½ dis.
South Wales—50l shares	5	4	5
Vale of Neath	2		1
Waterford and Kilkenny	11	6	7
Welsh Midland	2½	1	1
West Riding Union	4½	¾ pm.	¾ pm.
Wilts, Somerset, and Weymouth—50l shares	10	4½	4½
York and Carlisle	2½	1	
York and North Midland—50l shares	50	94	94
Ditto Selby—50l shares	40	81	81
FOREIGN RAILWAYS.			
Boulogne and Amiens—20l shares	16	14½	14½
Bordeaux and Toulouse and Cette (Mackenzie)—20l shares	2	1½ dis.	1
Bordeaux, Toulouse, and Cette (Espalette)—20l. shares	2	1	1½
Central of Spain—20l shares	2		1
Dutch Rhenish—20l shares	6	4½	4½
East Indian		½	
Great Northern of France (constituted)	5	13	13½
Great Western Bengal	½		¼
Jamaica and South Midland Junction—20l shares	1	1½	1½
Louvaine a la Sambre—20l shares	6	1½	7½
Lyons and Avignon—20l shares	2	—	4
Luxembourg	4	1½	1
Namur and Liege—20l shares	6	1½	1
Orleans and Vierzon—20l shares	10	14½	14
Orleans and Bordeaux—20l shares	6	7	7½
Paris and Lyons Constituted	8	4½	4
Paris and Orleans—20l shares	20	48	48
Paris and Rouen—20l shares	20	36½	36
Rouen and Havre—20l shares	20	28	27½
Sambre and Meuse—20l shares	10	3¼	5
Strasburg and Basle—14l shares	14	9	9
West Flanders	6	3	3

RAILWAY TRAFFIC RETURNS.

From these returns, it will be seen, that the amount of traffic for the last week, on nearly 2350 miles of railway, was 172,660l., thus accounted for:—96,581l. for the conveyance of passengers only, 42,023l. for the carriage of goods, and a remainder of 34,062l. for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of 31,854l.

Name of Railway.	Lgth. Rway.	Present actual cost.	Last Div.	*Traffic Returns.* 1846	1845
Arbroath and Forfar	15	£142,900	3 p.c.	£256 2 8	£170
Chester and Birkenhead	15	658,293	2½	674 13 9	779
Dublin and Drogheda	32	699,975	3½	763 8 9	742
Dublin and Kingstown	6	449,736	9	878 4 6	993
Dundee and Arbroath	17	156,324	6	322 2 10½	294
Durham and Sunderland	19	302,118	2	647 1 4	725
E. Counties & North. & East.	161	4,746,113	5	9526 2 5	6385
Eastern Union	—	—	—	405 9 4	—
Edinburgh and Glasgow	46	2,112,736	6	4017 8 11	2873
Glasgow, Paisley, and Ayr	53	1,301,381	7	2314 19 9	1948
Glasgow, Paisley, & Greenock	23	829,427	2	959 13 2	862
Gravesend and Rochester	7	82,828	—	—	197
Great Western	241	8,885,605	8	19668 19 6	19230
Hartlepool	—	—	—	929 3 6	1225
London and North Western	440½	16,327,526	10	41129 7 9	39589
London and Blackwall	4	1,078,761	1½	900 0 0	860
London & Brighton & South Coast	113	4,670,721	5	10071 1 6	5718
London and South-Western	106	3,648,547	10½	6909 6 11½	7160
Manchester & Leeds	117	4,636,556	8	9278 19 6	7340
Manchester, Bolton, & Bury	10	842,725	5½	—	1015
Midland Company	331	8,831,195	7	19959 5 6	18250
Newcastle and Carlisle	65	1,137,385	5	2015 4 0	1872
Norfolk	52	985,080	5	1558 10 4	1443
North British	72	1,459,957	—	1261 4 4	—
Preston and Wyre	29	432,014	2½	763 15 2	551
Sheffield and Manchester	49	1,633,331	5	1888 15 0	1208
South Devon	15	778,976	—	875 17 11	—
South-Eastern and Dover	120	6,613,335	8½	10402 14 5	8364
Taff Vale	30	690,229	5	1424 5 4	1144
Ulster	25	358,353	5½	789 4 8	687
York and North Midland	162	2,334,599	10	6856 [illegible] 3	5882
Northern of France	260	—	4	10000 0 0	—
Orleans and Bordeaux	72	599,040	4	3513 0 0	—
Paris and Orleans	82	2,082,916	9½	9222 0 0	8244
Paris and Rouen	85	1,995,306	8	7648 0 0	6644

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Adair's Main 15 6—Carr's Hartley 18—Ravensworth's Pelaw 15—Blaengwaur 20 9—Gwendraeth 26—Llangennech 22 6—Wall's End Hilda 18—Ramsay 15—Belmont 19—Braddyll's Hetton 20 6—Hetton 20 3—Lambton 20—Whitwell 18 6—Thornley 19—Killingworth 18—Ships at market, 23; sold, 20; unsold, 3.

WEDNESDAY.—Adair's Main 15 6—Buddle's West Hartley 19 3—Charlotte 17—Carr's Hartley 19 3—Dean's Primrose 15—Forest Main 17—Holywell Main 17—Newcastle Hartley 16—New Tanfield 13 6—Old Pontop 13 6—Original Tanfield 13 6—Ord's Redheugh 15 6—Ravensworth's Pelaw 15—Stewart's Hartley 16 6—Taylor's West Hartley 18—Tanfield Moor 16—West Wylam 16 6—Wylam 16 6—Chester Main 16 9—Wall's End Acorn Close 17 6—Bell and Brown 18 3—Bewicke and Co. 18 6—Bell Robson 17 3—Clarke and Co. 17 3—Clennel 17—Gosforth 18—Heaton 18 3—Hilda 18—Hotspur 18—Killingworth 17 9—Riddell's 17 9—Richardson's 17 6—Walker 18—Wharncliffe 18 3—Eden Main 18 9—Belmont 19—Braddyll's Hetton 20—East Hetton 18 9—Finchale 18—Haswell 20 3—Hetton 20—Lambton 19 9—North Hetton Lyons 18 6—Richmond 18 9—Russell's Hetton 19 6—Shotton 19 3—Stewart's 20—Wearmouth 19 9—Howden 18—Hartlepool 20—Heugh Hall 19—Lumley 17 6—Ludworth 19 9—St. Cuthbert's Cassop 18 9—Thornley 18 9—Adelaide Tees 19 6—Cowndon Tees 17 9—Seymour Tees 18 9—South Durham 18 0—Tees 20—West Hetton 18 3—Cowpen Hartley 19 3—Ludworth Steam 16 6—Sidney's Hartley 19 3—West Hartley Netherton 19 3.—Ships at market, 224; sold, 199; unsold, 25.

FRIDAY.—Adair's Main 15 6—Chester Main 16 9—Forest Main 17 6—Grace's Hartley 16—Hollywell Main 17—North Percy Hartley 18 6—Old Pontop 13 6—Ord's Redheugh 15 6—Ravensworth Pelaw 15—Stewart's Hartley 16 9 to 17—Shaftoe Hartley 17 6—Taylor's West 18—Tanfield Moor 16 3—Twyzell Main 14 6—West Wylam 16 6—Eden Main 19 3—Haigh Moor 16 3—Sidney's Hartley 19 9—Wall's End Bewicke and Co. 18 9—Clarke and Co. 17 6—Clennell 17 6—Gosforth 18 6—Hedley Beamish 15 9—Killingworth 18—Northumberland 18—Riddell's 18—Wharncliffe 18 3—Belmont 19 3—Braddyll's Hetton 20 3—Hinchale 18 6—Hetton 20 3—Lambton 20—Russell's Hetton 19 9—Shotton 19 9—Stewart's 20 3—Wearmouth 20—Whitwell 18 3—Caradoc 19 6—Hartlepool 20 6—Heugh Hall 19—Ludworth 20 3—Barrett 18 9—Brown's Deanery 19—Seymour Tees 19—West Hetton 18 3 to 18 6.—Ships at market, 100; sold, 69; unsold, 31.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1024	Alfred Consols	4½	40
235	Andrew and Nangiles	25½	25
1000	Barristown	4½	25
4000	Bedford	2½	8½
128	Besore Lead Mine	14	30
320	Birch Tor Tin Mine	12	10
8000	Blaenavon	50	40
256	Bodwannick	3	
100	Botallack	175	300
120	Brewer	—	5
10000	British Iron, New, regis.	10	19
—	Ditto ditto, scrip	10	19
128	Budnick Consols	32½	45
100	Bwlch Cwmerlin	20	—
1000	Callington	19	22
256	Caradon Consols	45	25
256	Caradon Copper Mine	9½	1
256	Caradon Mines	15	24
256	Caradon United	24	12
256	Caradon Wh. Hooper	12	7
1000	Carn Brea	15	100
114	Charlestown	—	200
166	Cleveland	9	7
1900	Combmartin	5½	4½
1000	Comblawn	2½	2
128	Comfort	—	40
5000	Con. Tretoil Mining Ass.	3½	¾
128	Condurrow	36	52
2560	Cook's Kitchen	—	4
1000	Copper Bottom	1	5
1024	Cosheen	4½	30
240	Craddock Moor	14	25
128	Creeg Brawse	120	200
500	Cubert Mine	12	28
7100	Derwent	8½	5
1024	Devon & Courtney Con.	4	4½
1000	Dhurode	2	5
186	Dolcoath	—	40
10000	Durham County Coal	45	9
256	East Alvenney	3	10
112	East Caradon	40	60
128	East Pool	5	20
128	East Relistian	—	10
9000	East Tamar Consols	1½	3
—	East Wheal Albert	1	3
94	East Wheal Crofty	—	300
256	East Wheal Fortune	14	3
256	East Wheal Kitty	½	1
128	East Wheal Rose	50	1100
123	East Wheal Seton	2½	12
512	Fowey Consols	—	40
20000	Galvanised Iron Co.	10	10
10000	Gen. Mining Co. for Irel.	—	—
1000	Godolphin	—	—
256	Gonamena	19	95
128	Gover	23	200
2441	Grambler & St. Aubyn	—	21
100	Great Consols	1000	400
256	Great Calestick Moors	6½	12
2560	Great Mitchel Consols	—	2½
256	Great Reaugga Moor	12	6
512	Gt. Wh. Rough Torr Con.	1	20
100	Grogwinion	5	—
1000	Gunnis Lake	1½	3
1000	Hanson	1½	3
1000	Harrowbarrow Old Mine	5½	4
1000	Harrowbarrow Consols	2	—
800	Hawkmoor	3	2
6000	Heigngston Down Con.	1	2
256	Herodsfoot	14	10
10000	Hibernian	12½	1
—	Hobb's Hill	4	8
1000	Holmbush	18	9
256	Ivy Tor	1½	2½
827	Kirkcudbrightshire	3½	5½
2048	Lamlerooe Wh. Maria	6	4
2048	Lanivet Consols	2	3
200	Larkholes	1	3
160	Levant	—	90
1000	Lewis	15	3
1280	Llancynfelin	6	10
128	Ludcott	8	1
4000	Marke Valley	10	3½
5000	Mendip Hills	1½	1½
20000	Mining Co. of Ireland	7	12
200	Nanterrow Consols	14½	10
128	New East Crowndale	2	2
128	North Fowey Consols	13	20
100	North Pool	11	51
70	North Roskear	10½	400
256	North Treburget	2	5
100	North United	41	20
256	North Wh. Leisure	1½	4
128	North Wh. Providence	2½	10
256	North Wheal Rose	26½	10
5000	Northern Coal Co.	23	2
600	Old Delabole Slate Co.	25	45
128	Par Consols	—	900
256	Pembroke	½	2½
256	Penhalow Moor	15	4
6000	Pennant	1	1½
100	Penrhiw	30	65
128	Pen-y-Cefn Mine	50	55
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	9½	40
512	Plymouth Wh. Yeoland	1½	3½
2048	Prince Edward	1½	1½
256	Redruth Consols	3	9
10000	Rhymney Iron	50	25
256	Rose Consols	10	3
1000	Rosewall Hill	1	3½
2800	Silver Valley	3	2
256	Sourton Consols	3½	3
128	South Caradon	10	350
2000	South Dolcoath	2	—
256	Sth. Friendsh. Wh. Ann	7½	16
200	South Harvannah	23	2½
194	South Tolgus	2½	5
800	South Towan	10	1½
256	South Trelawney	12½	8
128	South Yeoland	16½	20
128	South Wheal Basset	—	120

BRITISH MINES—*continued.*

Shares.	Company.	Paid	Price.
121	South Wh. Francis	67	140
256	South Wh. Hope	—	5
1000	South Wh. Maria	2½	2½
256	South Wheal Rose	11½	1
10000	Southern & Western, Irish	1	2
256	St. Austell Consols	7	15
94	St. Ives Consols	—	600
1000	Stray Park	43	91
9600	Tamar Consols	3	6
1024	Tavy Consols	1½	3½
6000	Tincroft	7	10
256	Ting Tang	89	21
128	Tokenbury	124	20
256	Trehane	—	17
1024	Trelawney Consols	1½	1½
5000	Treleigh Consols	6	3½
256	Trenow Consols	—	110
96	Tresavean	10	250
120	Trethellan	5	30
120	Treviskey and Barrier	61	120
256	Trewallack	—	15
128	Trewellard	12	25½
4000	United Hills	5	2½
100	United Mines	300	800
256	Wellington Mines	15	50
128	West Basset	45	10
256	West Caradon	20	250
128	West Cargoll	2	12
512	West Fowey Consols	40	35
—	West Kekewich Consols	—	2½
256	Wheal Kekewich	4	6
256	West Providence	—	10
200	West Seton	—	44
120	West Trethellan	5	30
256	West United Hills	2½	3
256	West Wh. Friendship	7½	5
3845	West Wheal Jewel	11	1½
2560	West Wh. Maria	½	2
2560	West Wh. Mitchell	—	2
256	West Wheal Shepherd	—	6
256	West Wheal Tolgus	21½	8
256	West Wheal Treasury	14½	8
240	Westerlake	8	3
6000	Wicklow Copper	5	16
1000	Wheal Agar	—	
256	Wheal Albert	10	8
128	Wheal Acland	13	2
256	Wheal Allen	½	4
368	Wheal Anderton	10½	11½
128	Wheal Ann	—	50
128	Wheal Arvose	2	2½
256	Wheal Blencowe	—	12
256	Wheal Byon Consols	½	½
256	Wheal Cleveland	7	6½
136	Wheal Clifford	—	190
1024	Wheal Concord	6½	5
512	Wheal Elizabeth	2½	5
256	Wheal Fortescue	4½	8
256	Wheal Frederick	3	20
384	Wheal Franco	25	80
256	Wheal Gill	19½	21
128	Wheal Harriet	45	48
2048	Wheal Holwell	1½	1½
109	Wheal Hope (Zennor)	23	25
256	Wheal Jane	6	40
265	Wheal Kendall	11½	8
256	Wheal Louisa	5½	8
1024	Wheal Maria	1	420
4000	Wheal Martha Consols	5	2½
256	Wheal Mary Ann	5	80
1024	Wheal Mary (Calstock)	4½	1½
256	Wheal Mary Consols	30	25
256	Wheal Mary Lanivet	2½	8
256	Wheal Mary Pentuan	1	2
256	Wheal Maud	1½	4
128	Wheal Metha	16	100
256	Wheal Norris	9	3
128	Wheal Pollard	12½	12
128	Wheal Prospect	4	8
128	Wheal Providence	34	40
128	Wheal Reeth	1	60
128	Wheal Rose	40	25
256	Wheal Salisbury	13	1
512	Wheal Sarah	2½	5
99	Wheal Seton	150	835
1024	Wheal Spearne	1½	8
256	Wheal Sisters	25½	20
128	Wheal St. Cleer	21½	15
200	Wheal Trelawney	7½	108
256	Wheal Trevenna	3½	½
256	Wheal Trewennan	—	10
128	Wheal Venland	12½	10
256	Wheal Victoria	2	2
127	Wheal Virgin	—	50
1024	Wheal Walter	½	3½
256	Wheal Williams	2	20

FOREIGN MINES.

Shares.	Company.	Paid	Price.
5000	Alten Mining Company	14½	3
15000	Asturian Mining Co.	6	3
10000	Anglo-Mexican Co.	100	3
3374	Ditto Subscription	25	4
2000	Bolanos	150	6
12000	Ditto Scrip	15	5
10000	Brazilian Imperial	20	4
12000	Cobre Copper Co.	40	28
8500	Colombian Co. regis.	55	} 4½
5000	Ditto Scrip	—	}
10000	Copiapo Mining Co.	14	3
20000	General Mining Ass'n.	20	15½
5051	Mexican Company	59	5
12000	Mocaubas & Cocaes	25	8½
29320	{ Rl. del Monte, regis. / Ditto unregistered }	28½	av. 4
	Ditto Red Debentures	—	19
	Ditto Black ditto	—	17
	Ditto Loan Notes	150	117
7000	Royal Santiago	10	16
2000	Pachuca Mines	3	3½
11000	St. John del Rey	15	9½
43174	United Mexican	28½	3½

** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

LATEST CURRENT PRICES OF METALS.

LONDON, OCTOBER 16, 1845.

	£ s.	£ s. d.
Iron—Bar a, Wales .. ton	8 15	— 9 0 0
„ London	9 15	— 10 0 0
Nail rods „	0 0	— 10 15 0
Hoop (Staf.) „	11 5	— 11 10 0
Sheet „	0 0	— 13 0 0
Bars „	11 0	— 11 10 0
Welsh cold-blast foundry pig	0 0	— 5 5 0
Scotch pig b, Clyde	3 10	— 3 11 0
Rails, average	9 15	— 10 0 0
Russian, CCND c	0 0	— ——
„ PSI	0 0	—
„ Gourieff	0 0	—
„ Archangel	0 0	— 13 10 0
Swedish d, on the spot	0 0	— 11 10 0
„ Steel, fagt.	0 0	— 16 0 0
„ „ kegs e	13 15	— 14 0 0
Copper—Tile f	0 0	— 87 10 0
Tough cake	0 0	— 88 10 0
Best selected	0 0	— 91 10 0
Copper—Ordin. sheets, lb.	0 0	— 0 0 10
„ bottoms	0 0	— 0 0 11
Tin—Com. blocks g .. cwt.	0 0	— 4 15 0
„ bars	0 0	— 4 16 6
Refined	0 0	— 4 18 0
Straits h	4 18	— 4 19 0
Banca	5 0	— 5 2 0
Tin-Plates—Ch. IC i, box	1 9	— 1 11 0
„ IX	1 15	— 1 17 0
Coke, IC	1 5 6	1 6 0
„ IX	1 11 6	1 12 0
Lead—Sheet k .. ton	0 0	— 19 5 0
Pig, refined	0 0	— 20 10 0
„ common	0 0	— 18 0 0
„ Spanish, in bd.	0 0	— 18 0 0
„ American	0 0	— ——
Spelter—(Cake) l	0 0	— 19 0 0
Zinc—(Sheet) m export.*	0 0	— 28 0 0
Quicksilver n .. lb.	0 0	— 0 4 6
Refined Metal .. ton	0 0	— ——

a Discount 2½ per cent. b Net cash. c Discount [illegible] d Ditto. e In kegs ¾ and ⅝-inch. f Discount 3 per cent. g Ditto 2½ per cent. h Net cash. In bond. i Discount 3 per cent. k Ditto 2½ per cent. l Net cash. m Discount 1½ per cent. n Discount 1½ per cent. * For home use it is 32l. per ton.

[*From our Correspondent.*]

Iron—Welsh and Staffordshire in good demand. Scotch pig has been sold this week at 67s. 6d. for mixed Nos.; and at 68s. for all No. 1, at which rates a considerable business was done, to-day the prices are full 2s. per ton higher.

Tin.—English remains unaltered in price; but the supply is still very short of the demand. A parcel of 744 slabs Straits sold at public sale, on 13th inst., at 97s. 6d. to 99s.—the greatest portion at the latter price; and Banca has been sold at 100s. to 101s.

Spelter is firm at 19l., both on the spot and for arrival, and some parcels have been sold during the week at this price; other metals remain steady at quotations, without any thing particular to notice in them.

[*Communicated by Messrs. Whitcomb and Barth, Old Broad-street.*]

English bar-iron continues steady; a considerable fluctuation has taken place during the last 10 days in Scotch pig-iron—sales having been made as low as 68s. 6d., cash; since which prices have rallied, and we may quote the market firm at 70s. for mixed numbers, and 72s. for all No. 1 cash. English copper is in fair demand at quotations, as also English lead. English and foreign tin have been in great request; 7[illegible] slabs Straits tin were sold on Tuesday last at 98s. and 99s. Tin-plates remain firm at [illegible] for I.C. coke.—In other metals no alteration.

GLASGOW PIG-IRON TRADE.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—There have been considerable fluctuations in prices since our last, [illegible] one time sales were effected as low as 68s. 6d. for mixed Nos., and 70s. for No. 1, cash in [illegible] days—now they are being made at 70s. to 71s. for mixed Nos., and 72s. for No. 1. The feeling is improved, and holders have become firmer. The shipments from here, both coastwise and foreign, amounted to about 24,000 tons last month.

Glasgow, Oct. 15. DOUGLAS & HILL, Metal Brokers.

EXPORTS OF PIG-IRON, from Port Dundas, Kirkintilloch, and Clyde, during Sept. last:—From Port Dundas and Kirkintilloch, 12,867 tons; from Clyde, 11,100 tons—in all, 23,967 tons.

SOUTH-EASTERN NORTH KENT RAILWAY.—The works of this important railway are proceeding rapidly at the London end. The first contract has been let to Messrs. Little and Sons, who laid the first brick of the new work on the 28th September. The work consists of a further widening of the viaduct of the Greenwich Railway to the extent of 22 ft. 6 in., in addition to its present width, for the necessary additional rails, preserving as much as possible the original character of construction. This great work is under the immediate direction of P. W. Barlow, Esq., F.R.S., the resident engineer of the South-Eastern Railway. We understand that the whole of the line has been staked out, and that the widening of the Gravesend and Rochester Railway will be immediately commenced.

GREAT NORTH OF ENGLAND, CLARENCE, AND HARTLEPOOL JUNCTION RAILWAY.—This line, which is about eight miles in length, and which has been constructed for the unusually low cost of 10,000l. per mile—having been purchased by the Newcastle and Darlington Railway Company—Monday last was the day fixed for taking possession of, and opening the same; when G. Hudson, Esq., on behalf of the latter company, the Mayor of York, and a numerous party of friends, were met at the Ferry Hill station, by the Mayor of Hartlepool, and a number of directors of the adjoining lines, when the two trains were united, and proceeded to Hartlepool, a distance of 16 miles, which was accomplished in three-quarters of an hour. The company afterwards sat down to a splendid dinner at the Kings' Head Inn; and at half-past 10 o'clock, Mr. Hudson, and his friends, were conveyed back to York by a special train. There appear to have been no particular engineering difficulties to surmount on the line—a few deep cuttings, and one or two high embankments, being the principal, which accounts for the low cost in the construction. It is expected to be a profitable adjunct to the Newcastle and Darlington line.

AMBERGATE, NOTTINGHAM, AND BOSTON, AND EASTERN JUNCTION RAILWAY.—A meeting of the shareholders of the above line was held on Thursday, in the Exchange Rooms, Nottingham.—W. F. N. NORTON, Esq., presided. The report announced the purchase of the Nottingham and Grantham Canals, at 225l. per share in cash, or nine railway shares of 25l. each, at par, at the option of the canal proprietors, to be signified in writing to the directors, within two months after the opening of the railway between Ambergate and Grantham for public use; and the latter canal and works at 160l. in cash for each share, or six railway shares of 25l. each, at par, upon the like terms as before mentioned, relating to the Nottingham Canal. The Midland Railway Company have, under the optional power conceded to them of taking 10,000 shares in the company, declined accepting them, but have entered into a friendly agreement to make the line for about four miles to the west of Nottingham jointly with this company. In pursuance of the agreement entered into with the Grand Union Railway, the shareholders in that company have claimed to register 26,984 shares in the capital of the amalgamated companies, which will as a necessary consequence, occasion a diminution in the amount per share, which amount will be decided upon by the directors as soon as circumstances will permit. The line has been resurveyed and very slight alteration found to be necessary. No call will be made during the present year (beyond the sum of 2l. 12s. 6d. per share), of which three months' notice will be given. The receipts amounted to 171,381l., and the expenses to 24,206l. The expenses will not exceed 11s. per share, and the balance in hand, including the probable balance of 53,968l. from the Grand Union, amounts to 201,147l.—The report was adopted: the directors appointed, at an allowance of 1500l. per annum; the secretary's fixed at 350l. per annum; and Messrs. Glyn and Co., bankers, London, appointed treasurers, with a remuneration of 1500l. per annum.

COPPER ORES

Sampled September 23, and Sold at Swansea, October 14, 1846.

Mines.	Tons.	Prod.	Stand.	Price.	Mines.	Tons.	Prod.	Stand.	Price.
Cobre	108	13½	88½	£9 10 0	Santiago	121	16½	86¾	£11 14 6
ditto	90	13½	87½	9 11 0	ditto	115	16¾	86½	11 18 6
ditto	82	23¾	82½	17 1 0	ditto	95	16½	87½	11 18 6
ditto	74	22	83	16 0 6	ditto	3	71	66½	45 0 0
ditto	60	13¾	87¼	9 9 0	Chili	52	50	79½	37 12 0
ditto	48	23½	82¼	16 18 6	ditto	51	49½	81½	38 2 6
ditto	117	12½	88½	8 16 6	ditto	47	49½	81½	38 0 0
ditto	95	22	83½	16 2 6	ditto	44	26½	85½	20 2 6
ditto	92	21¾	83	15 16 6	ditto	50	30½	81½	22 10 0
ditto	64	13½	88½	9 15 6	ditto	45	30½	81½	22 10 0
ditto	30	13½	89	9 10 6	Kapunda	46	10½	88½	15 5 6
ditto	21	17	85½	12 6 0	Mediterranean	28	6½	—	withdrawn
ditto	106	12½	91	9 0 0	Lackamore	13	10½	96½	7 10 6
ditto	96	13½	89½	9 11 6	ditto	6	4½	117½	2 12 0
Santiago	128	16¾	87½	12 1 6	ditto	5	24	85½	18 5 6

TOTAL PRODUCE.

Cobre	1080	£12883 10 0	Kapunda	46	£702 12 0
Santiago	462	5603 11 6	Mediterranean	28	withdrawn.
Chili	289	8708 11 6	Lackamore	24	204 13 6

Total tons, 1929.—Total amount, £28,102 19s. 6d.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
English Copper Company	336	£5109 2 0
Freeman and Co.	92	1345 2 0
P. Grenfells and Sons	241	3920 5 6
Sims, Willyams, and Co.	287	4715 14 6
Vivian and Sons	299	3363 4 6
Williams, Foster, and Co.	403	6730 12 0
Mines Royal	243	2916 19 6
Total tons	1901	£28,102 19 6

Withdrawn, 28 tons—making the total 1929 tons.

Copper Ores for Sale, Oct. 28.—Knockmahon 112, ditto 100, ditto 79, ditto 60, ditto 58,—Chili 97, ditto 86, ditto 81, ditto 69—Kapunda 86, ditto 78, ditto 77, ditto 27—Berehaven 90, ditto 80—Cobre 53, ditto 41, ditto 17—Kenmare 44—Holyford 17, ditto 9.—Total, 1363.

COPPER ORES.

NO SALE on Thursday last, October 15.

Copper ores for sale on Thursday next, at Andrew's Hotel, Redruth.—Mines and Parcels.—Devonshire Great Consols, Wheal Maria, and Wheal Fanny 1143—Tresavean 515—West Caradon 380—Fowey Consols 243—Wheal Friendship 235—West Wheal Jewel 191—Holmbush 97—Bedford United Mines 92—Marke Valley 76—Wheal Buller 47—Wheal Gorland 16.—Total, 3035 tons.

Copper ores for sale on Thursday week, at Farquharson's Red Lion Hotel, Truro.—Mines and Parcels.—United Mines 1192—South Caradon 376—Par Consols 228—Treleigh Consols 206—Copper House Dross 158—Creegbraws 148—Trethellan 85—Wheal Sisters 67—North Downs 51—West Trethellan 46—Penpoll Regulus 40—Wheal Gill 38.—Total 2629 tons.

PRICE OF MATERIALS,

As Charged at Stray Park Mines, for July and August.

DESCRIPTION.		JULY.	AUGUST.
Coal, carriage included	per ton	15s. 0d.	15s. 0d.
Timber, balk	per foot	1 3	1 3
Iron, common	per cwt.	10 0	10 0
Candles, London	per doz.	5 0	5 0
Tallow, best	per cwt.	44 0	—
Oil, olive	per gall.	3 6	—
„ rape	„	3 0	—
Gunpowder		36 0	36 0
Nails, patent board	per cwt.	19 0	—
„ 5-inch spikes	„	19 0	—
Leather	per lb.	1 2	1 2
Leads, white	per cwt.	25 0	—
Hilts	per doz.	1 4	—
Whim kibbles	per cwt.	19 0	—

WORK PERFORMED BY CORNISH ENGINES.

The number of pumping-engines reported for the month of Sept. is 26—the quantity of coals consumed being 1573 tons, lifting, in the aggregate, 15,000,000 tons of water 10 fathoms high—the average duty of the whole is, therefore, 53,000,000 lbs. lifted 1 foot high by the consumption of a bushel of coal. The following have exceeded the average:—

Mines.	Engines.	Length of stroke	Load in pounds.	Load per sq. inch on pist.	Strokes per min.	Consump. of coal in bus.	Million lbs. lifted 1 foot by consump. of 1 bush. coal	Average quantity of water per min.
Wh. Prosper	Roberts's 70-in.	9·75	72,374	14·6	4·8	1920	56·4	360·0
Great Work	Leed's 60-in.	9·0	47,020	12·9	7·2	1684	57·0	171·0
Carn Brea	{ Sims's 50, 90 in. combined }	9·0	42,291	10·7	3·8	727	61·4	107·0
Poldice	Sims's 85-in.	10·0	78,055	9·6	5·4	1930	59·8	363·0
United Mines	Taylor's 85-in.	11·0	97,168	15·5	5·7	2290	84·9	} 1228·0
Ditto	Eldon's 30-inch	9·0	12,631	16·0	6·0	486	64·4	
Ditto	Loam's 85-inch	10·0	79,320	11·8	5·1	2286	50·6	
Ditto	Hocking's 85-in.	10·0	88,189	14·6	5·8	3201	58·9	
United Hills	Williams' 80 in.	10·0	73,938	11·7	6·2	2366	65·7	430·0
East Wh. Rose	Michell's 70 in.	10·0	52,516	12·9	5·6	2080	54·0	74·5

NOTICE TO CORRESPONDENTS.

The MINING JOURNAL is pu[blis]hed at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, [and] can be obtained at Twelve of all the news agents, at the Royal Exchange and [neig]hbourhood.

"A Shareholder" (Lir[erpool]).—The letter has been handed to the directors, who will attend to its content[s].

Mr. B. (Liverpool).—Any bookseller, or newsman, in the town will furnish the Journal regularly, on r[ec]eiving instructions.

"A Constant R[ea]der" (Brixton) should address the secretary, at the offices, Old Broad-st

The Univers[al] Atmospheric System shall appear in our next.

"R. M." (Cambridge Heath).—We shall be glad to receive the particulars of the transactions alluded to—and, if deemed of sufficient importance, to lay them, as a "caution," before our readers. Doubtless, much that is disreputable has taken place—but, may not a want of proper caution, and an undue trust placed in characterless adventurers, with mere "trinkets for sale," be chargeable to many who would now declaim about having suffered from "the false representations of mine sharebrokers." Far be it from us to shield such doings of unprincipled persons, as, unfortunately, are too frequently brought under our notice; but, as the best preventative, we would seriously advise those who are desirous of embarking in mining speculation, previous to so doing, to consult some respectable broker, several of whose addresses are inserted in our first page—they may then rest assured they are dealing with honest men, and whose interest it is to protect them from misrepresentation and its ill consequences.

SOUTH AUSTRALIAN MINES.—*Erratum.*—In last Journal, in noticing the shipment of ore, from the Burra Burra Mines—the sum received for the 1197 tons sent to England, 10,024*l.*, was merely the sum drawn on account, and is not to be taken as the actual value of the ores, which may prove considerable more.

MR. BURNIER AND THE GEOMETRICAL RAILWAY.—*Erratum.*—In the letter of "Geometricus," in last week's Journal, fifth paragraph, for "*this antique* is incapable of criticism,"—read "*his critique* is incapable of criticism."

*** Our next Journal will be on the usual ENLARGED SHEET, and will contain, besides several articles and miscellaneous intelligence—continuation of the series of papers on the METALLURGICAL TREATMENT OF METALS—Letters from Mr. Burnier, Mr. Weston, "M. P. R.," Mr. Martin, &c.

THE MINING JOURNAL

And Atmospheric Railway Gazette.

LONDON, OCTOBER 17, 1846.

In the MINING JOURNAL of the 29th of August last, we made some remarks on the growing success of the Alten Mines, in Norway, stating our belief that, if the then appearances continued, the directors would be justified, at their meeting in October, in declaring a dividend of 5s. per share. We are happy to find that our expectations have been fully realised, as will be seen by our advertising columns—a dividend of 5s. per share having been declared payable on the 26th inst. This dividend is *bonâ fide* out of the profits for the half year to March last; and the prospects of the company are considered to be more flattering than at the commencement of that period, when indications of working to a profit began to manifest themselves. There is now the most sanguine expectations, that profitable results, through reduction of expenses, and other circumstances, will continue. The half year ending September last (the accounts for which have not yet been received), is fully expected to exceed, in amount of returns, the previous one; while, with that ending in March next, it is hoped the directors will be enabled to declare a still higher amount of dividend, when they shall have received the amount of the proceeds—namely, in the July or August following. These are but expectations, but they are anticipations which may reasonably be entertained by the shareholders, as the mines in the development of the past year have greatly altered for the better, and are likely now to hold out and improve; which is the opinion of several first-rate miners acquainted with this locality. We believe the "plant" to be one of the most perfect in Europe; there are abundant stores to keep up a sufficient force throughout the winter, no arrears of merchants' bills or mine debts to pay, and a fair balance of cash in hand, after the payment of the dividend. Under these circumstances, we think the shareholders may congratulate themselves on the aspect of their affairs, and we sincerely trust the promises now held out may be permanently realised.

The visit to this country of his Excellency M. DUMON, the French Minister of Public Works, accompanied by several eminent engineers, for the purpose of examining the principal railways, iron manufactories, and other large metallic establishments, and locomotive engine factories, will, no doubt, have a very beneficial effect, as the chief object of the Minister, we understand, has been to have ocular proof of our mining industry and engineering science, which has rendered England the admiration of the whole world. M. DUMON is a man of much experience, and, during the time he has been Minister of Public Works, has had every opportunity of appreciating the progress making in France, with respect to railways, civil engineering, and mechanical knowledge, so as to be enabled to form a just comparison between the two countries. We have before alluded to the project proposed by the several French Ministers to the Chambers, for the reduction of the duty on British cast-iron for shipbuilding, and other purposes, as also on machinery, which every one knows is very excessive. The Government has evinced a desire to make such a reduction, but has been strongly, and as yet successfully, opposed by the monopolists in the Chambers, and the different mining departments. During his short sojourn in London, M. DUMON has been several times at the Board of Trade, and every facility was afforded him by Mr. PORTER, in obtaining the information required on the railway system of this country; and the changes intended to be introduced with respect to the broad and narrow gauge, the atmospheric system of propulsion, and all the *minutiæ* connected with railway economy. It is, therefore, to be hoped, that ere long we shall have the pleasure of announcing that the next to prohibitory duties on British iron, machinery, coal, and other resources of this country, will be noticed by the French Government, for the benefit and commercial intercourse of two of the most enterprising nations on the face of the globe.

The general demand for iron is increasing in a most unprecedented degree in this country, France, and Belgium; and, notwithstanding all the efforts of the iron and forge masters, they cannot keep pace with the orders received. The rapid progress of railways, the building of iron vessels, and the great increase in the use of iron for agricultural, building, and domestic purposes, has caused this vast addition to the trade, which could not, by possibility, have been conceived 10 or 15 years since, neither in the United Kingdom or on the continent. This extraordinary demand for every description of iron has naturally had a tendency to materially increase the price, as the ironmasters, both here and on the continent, are naturally anxious to make the most of the great requirements for the article in which they deal; and in France, particularly, a regular combination is kept up, which, with the Government protecting duties, renders iron nearly double the price it is in England. At St. Dizier, the great iron emporium of France, this metal is from 16*l.* to 17*l.* per 1000 kilogrammes; and, notwithstanding such exorbitant price, the manufacture has never been more brisk, both in the northern departments and Belgium; in the latter, the number of furnaces has greatly increased—those which were blown out in 1840, 1841, and 1842, are again in full operation, and a number of new furnaces are also erecting in various parts of the kingdom. The commercial travellers from the forges no longer need to journey into the provinces for orders, as they pour in faster than they can be supplied. Neither is this a mere momentary demand, but will, doubtless, extend over years to meet the engagements of the railway contractors, for completing the lines in progress, conceded, and yet to be conceded. The price of coke keeps pace with that of iron; and, as we have before stated, the scarcity of coal in France, suitable for making coke, is already becoming generally felt in the neighbourhoods of the furnaces. Amidst the great activity which exists, a fear begins to prevail that there will be a falling off in the supply of ore; and should such fears be realised, a thorough stagnation of the iron trade of France would be the result.

We are ever advocates for the confinement of the establishment of manufactories, and processes, whereby noxious gases are evolved, and the atmosphere deteriorated by deleterious compounds, to situations far apart from the abode of human life, and where they can neither destroy health, or injure property; but when we see a crusade got up against an establishment, from the working of which no such results can arise, we look upon it as emanating from a mawkish sensibility, or a desire to obtain notoriety, or some other interested motive, on the part of the "getters up"—we allude to the WESTERN GAS COMPANY, who are about to establish their works at Kensal Green, in a situation where, even if conducted on the system adopted 25 years ago, they *could not be a nuisance.* The great improvements, however, which the engineer of this company has introduced in the manufacture of gas, render the operation so perfectly innoxious, that it can never be felt in the neighbourhood; there is an absence of all smoke from the chimney, as *coke* is to be consumed in the furnaces for heating the retorts—the peculiar method of purification frees the gas from sulphuretted hydrogen, and ammoniacal gases: the latter being, with the naptha evolved from the coal, of too much value, as articles of commerce, to be allowed to escape, every precaution is taken for turning them to profit; while the improvement in the construction of the gas receivers, tar tanks, purifiers, and other parts of the machinery, render them *gas-tight*, and thus prevent any annoyance in their immediate neighbourhood, beyond the walls in which they will be inclosed. We think the few who have taken up the subject so warmly, are ill-advised, and premature in their opposition; as, should the works prove, to the smallest extent, a nuisance, they could afterwards be removed by bill of indictment, or action at law.

Among the almost endless applications of physical science to the useful arts, there is probably not one more important than the application of chemistry to agriculture. That individual will have attained to no mean height in a knowledge of agricultural chemistry, who has made himself acquainted with the properties of soil and manures, and their adaptation to each other, and to the crops of which they are to be the foundation and the food. The progress of agriculture has by no means kept pace with the arts, which are its companions in usefulness and antiquity; and the reason is that, throughout its voyages, down from the primitive ages to this day, it has not turned aside, as it should have done, to avail itself of those helps which are subsidiary and illustrative. With an exception or two, which only proves more fully the prevalence of the rule, agriculture is now what it was when VIRGIL, in his *Georgics*, sang the Roman *rationale* of the art, and RUTH gleaned her little sheaf rearward of the reapers. What has been the amount of material loss—how deep the circle of wealth which has been obliterated by this neglect—it is past our arithmetic to cast up; but the loss of secondary food crops, in the islands of the United Kingdom, during the last two summers, has swept away capital enough to have endowed colleges of agricultural chemistry from the Conquest until now. If Normal agricultural schools had been part of our domestic policy, it is probable we should not now find it beyond our power, either to remove or to restrain the pestilence that riots in our fields.

As it is not only one, but a majority, of the nations of Christendom, have a spoiler marching through our tilled meadows, of whom no one knows the origin or the history—a disease, in fact, as to whose cause or cure the world is in absolute ignorance—we may not inappropriately mention in this place, what has appeared to us a somewhat strange coincidence, that the spread and virulence of the disease in question, corresponds with the introduction of guano as a manure. The constituents of that peculiar exotic, we cannot accurately state; but, from the manner of its deposit, believe it to contain the salts of lime, and of ammonia, in abundance; the highly stimulating property of these bodies, or of the gases evolved from them by the heats of summer, would, to the lower class of edibles, give that morbid fecundity, which results in disease. It is remarkable, too, that the fruits having their vascular systems largely developed, and much water in their cavities, such as turnips, onions, potatoes, and others, have been the greatest, if not the only, recipients of the infection. We do but humbly suggest this for the consideration of the learned in vegetable physiology; and granting that the new disease and the new manure have no relation whatever, we still point to the singular fact, that their presence to this extent in Europe is contemporaneous. Again, the utility of chemical knowledge in treating the produce of metallic mines, cannot well be over-estimated; and, on that account, the establishment of local schools for teaching mineralogical chemistry, to each of which should be added a chair for instruction in geology, may be insisted on as essential to the well-doing of a great mining community. The metals have, in all ages of the world, excited the liveliest attention, and engrossed the most sedulous labour of mankind. Without them, the arts and the conveniences of life—the progress of society—the independence of nations—would have been fearfully checked and interrupted; and yet their treatment, whether in the matrix, in the beds, in which they were deposited by the Creating hand—or, when they come into furnaces and test-houses, where they receive their final manipulation—is far from being a perfected species of handling.

Under present circumstances, it can scarcely be otherwise than as it is; but when institutions for the instruction of the captains, and for all who will resort to them, are raised up, and in operation, there is little reason to doubt, that the mines of England will, as a whole, be worked with greater economy, and for greater productiveness. We are pleased to see that both as to mining and agriculture, we are come to the dawning of a better era; and that these works of peace, these ancient pursuits, are likely to have shed upon them the light of the auxiliary arts.

We understand that a splendid seam of coal has been met with in the celebrated Monkwearmouth Colliery. Some interesting particulars, respecting which, we hope to give in our next Journal.

APPARATUS FOR PREVENTING DANGEROUS CONSEQUENCES FROM COLLISION ON RAILWAYS.—Mr. E. Cheshire, of Birmingham, has patented an apparatus, by which, should a collision take place, the concussion will be immediately transferred from the engine or tender, in front, to a luggage waggon placed in the rear, or from the latter to the former, should the concussion take place from behind. The invention consists in the application to each passenger carriage of a train, of a safety buffer, in addition to the ordinary buffers; this safety buffer consists of a rod, with a buffer head at each end, mounted in bearings, carried by the under framing of the carriage, so as to be capable of moving endways in the same, and made of such length, that, when the ordinary buffer heads are in close contact, the heads of the safety buffers will be at short distances apart, and only be brought into contact by collision, when they will form, as it were, one firm unyielding bar, and transmit the shock from the van, which first receives it, direct to the van at the other end of the train.

GREAT COLLIERS' MEETING.—A meeting of the coal miners of Hindley and surrounding districts, was held near the Lord Nelson Inn. On the arrival of the procession from Wigan, which escorted Mr. W. P. Roberts, the "attorney-general," to the spot, Mr. John Berry was called to the chair. The meeting was addressed by Mr. Holgate and Mr. David Swallow, from Yorkshire, Mr. Wolsby, from near Halshaw Moor, and W. P. Roberts, Esq. In the course of the proceedings, the following resolutions were unanimously agreed to:—The abolition of riddles in pits, in order to afford more honourable dealings to the miners; and that a greater restriction of labour is necessary than at present prevails. Considering the size of the village, the meeting was numerously attended—there being not less than between 2000 and 3000 persons present.

CAUTION TO RAILWAY PROVISIONAL COMMITTEES, DIRECTORS, AND PROMOTERS.

[FROM A CORRESPONDENT.]

I take the liberty of drawing the attention of yourself, and of the readers of your valuable Journal, to an Act of Parliament, which was passed in August last, intituled, "An Act for Constituting Commissioners of Railways." This Act empowers the Crown to appoint five railway commissioners. Part of their duty is to inquire into, and report to the Crown upon, any subject relating to any railway, or proposed railway, which shall be specially referred to them for their opinion by her Majesty, or by either House of Parliament; and if it be a proposed railway, into which they are to inquire, they are directed to report on local inspection, or otherwise, on the following points:—

1. Whether there are any lines or schemes competing with the proposed railway.—2. Whether, by such bill, it is proposed to take powers for uniting with such railway, or proposed railway, any other railway or canal, or to purchase or lease any railway, canal, dock, road, or other public work, undertaking, or easement.—3. Whether, by such bill, it is proposed to constitute any branch railway, or an other work, in connection with the proposed railway.—4. Whether any plans, maps, or sections, of any proposed railway, which, pursuant to any order of either House of Parliament, shall have been deposited in their office, are correct; and, if not, in what particulars, and how far they are incorrect; and whether or not, in the opinion of the commissioners, such errors, as they shall find, are material to the object for which such plans and sections are required.

The Act then gives power to the Commissioners, to inspect and survey any proposed line of railway; and then it provides, that the expenses incurred by the commissioners in making such survey, and inspection, shall be paid by the provisional committee, or the promoters, of the intended railway; and, until the same be paid, the amount shall be *a specialty debt due to her Majesty, from the committee-men and promoters, and each of them severally, and shall be sued for and recovered accordingly.*

You will see, Sir, I have no doubt, *that the working of this Act of Parliament must necessarily increase the liability of every gentleman, who becomes a provisional committee-man, or promoter of a new intended railway company.* In addition to the enormous preliminary expense necessary to be incurred in making surveys by engineers on the part of the promoters, the promoters will also be liable to the payment of the same expense over again, for the surveyors appointed by the commissioners to act on their part. But the evil does not stop here; for, if the charge made by the commissioners, under this Act, for their survey, be not paid, when demanded, it may be recovered, as a specialty debt due to the Crown, from any one of the promoters—*so that every one of such promoters becomes liable* (in case of such non-payment happening) *to have an extent issued against his property for the alleged amount of the commissioners' expenses, of making the statutable surveys.*—E. H. P. : *Oct.* 15.

NEW SHARE AND MONEY MARKET, ROYAL EXCHANGE.—The losses which accrue to private capitalists and speculators in dealing in the share and scrip market, under the present system, has long been matter of serious complaint by both buyer and seller—the jobbers, on either side, taking advantage of the range of quotation, buy at the lowest, and sell at the highest, figure; and thus secure a profit which, in the numerous schemes on which the deposits only have been paid, absolutely often amounts to more than the price obtained for the share; while, had the principals met and dealt together, they would have arranged the price, and each been a considerable gainer; this, however, is, in a great measure, proposed to be remedied by the establishment of the New Exchange. We may observe, that Messrs. Stevens, Hansard, and Co., having opened a Transfer Register Office, where parties can deposit their scrip and share certificates, with the price they wish to obtain affixed thereon; and buyers can either choose from the lists in the register, or leave a statement of the shares they require, with the price they are willing to give. Buyer and seller will, by these means, effect their mutual objects; and, in every case, obtain more satisfactory results. We shall watch the progress of this novel establishment, and from time to time notice the results.

NAIRNE'S NEW MODE OF PROPULSION ON RAILWAYS.—We have received a paper, with diagrams, descriptive of a novel mode of propelling carriages on railways, the invention of Mr. W. Nairne, of Milnhaugh, near Perth. It came too late to do it justice this week; we shall, therefore, give an idea of the principle, and enter into a more detailed description in our next. He proposes to lay along the whole length of a railway an iron tube, 8 in. in diameter, with stationary engines, or water power, at every 10 miles, to cause a partial vacuum. At every 100 or 120 yards are to be fixed horizontally cylinders, fitted with a piston and valves, similar to those of a steam-engine; these cylinders are in connection with the continuous tube, and when the pressure of the atmosphere is allowed to act on the piston, a continuous motion is obtained. Exactly in the centre of the two lines of railway is placed a horizontal wheel, of such diameter that its outer edge comes within $1\frac{1}{2}$ in. of the centre of each line; outside of this another smaller wheel is placed on each line, and acted on by the centre one; they are all rebated on the outer circumference, forming a groove at the point of contact $2\frac{1}{2}$ in. wide—the small wheels being on moveable axes, working on a powerful spring, so as to admit a substance wider than $2\frac{1}{2}$ in. passing between. At the bottom of the leading carriage is what the patentee calls a *keel*—being a long bar of hard wood, of sufficient width to pass just tightly between the above wheels—which, being set in motion by the cylinders, or *propelling engines*, carries the train at rapid speed, and acquires momentum sufficient to carry it on to the next set of wheels, when the connected propelling engine carries it on as before. This is the principle of the invention; and in next week's Journal we shall give a full description of its mode of working, with calculations of cost and construction.

We have been informed that mines of sulphuret of zinc have lately been discovered in Cumberland, and a company is being formed to work them.

GLASS FOR OPTICAL PURPOSES.—The manufacture of optical glasses, exempt from minute bubbles, or streaks, and to produce them perfectly free from irregularity, and thus capable of refracting the rays of light in straight lines, has, for some years, been the particular study of M. Lucien Pellotier, of Paris, who, as long since as Oct., 1843, announced to the Academy of Sciences, at Paris, that he had perfectly succeeded. After a three years' residence in America, he has returned, and last week presented a paper to the Adademy, descriptive of the process, and containing testimonials of its efficiency. The best flint glass is composed of white or pure silicious sand 240 parts, carbonate of potash and lime 50, nitre 30, borax 14, and manganese 0·25—the carbonate of potash and lime being composed of 18 parts carbonate of potash, and 6 of lime. The method of preparing this alkaline salt is as follows:—18 lbs. of vegetable ashes, and 6 lbs. of hydrated protoxide of calcium, are well mixed, and diluted with warm water; it is then placed in a tub, with an orifice at bottom, and filtered through straw; when the lye reaches 17° of Baumé's aerometer, the water is then evaporated, and the crystalline salt calcined, when a highly caustic alkaline salt is obtained. When the ingredients have been melted into glass, and again become cold, it is reduced to a fine powder in an agate mortar, which is passed through a very fine sieve, fused a second time, reground, and again fused; the glass is then generally free from blemish; but, should any air bubbles remain, 6 grammes of spongy platinum, in powder, is mixed again with the pounded glass, which is then again remelted, when a most pure and perfect flint glass is produced, fit for all optical purposes.

PATENT FIXED METALLIC BROACHER.—Mr. Depledge, of the Thorncliffe Iron-Works, has taken out a patent for an improved broacher for tapping casks, by which the operation may be effected in an instant without spilling any of the contents; it will close the cask air-tight, and prevent it from becoming mouldy, after the liquor has been withdrawn; and it is impossible, when the broacher is closed, and sealed, for any person to withdraw any portion of the contents without detection. It cannot be very well described without a diagram, but consists of the broach, which can be instantly screwed into the cask, or other vessel, and may be then sealed; a peculiar tap is made to fit this broach, which can be instantaneously applied to it, and may be removed when sufficient liquor is drawn, and the broach will immediately close; or it may be left, and used with a key in the usual manner.

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

Some attention is being paid to mining matters in Spain, and it is pretty generally believed that that country presents a magnificent field for enterprise. A company is now being formed with a capital of 4,000,000 francs (160,000*l.*), for working the lead and copper mines at Linares. The shares are of 40*l.* each.

The "forges et fonderies" of Cirçay, in Valençay, in the department de l' Indre, are advertised to let.

The newspapers mention that the Pope, having caused to be sent to Paris for examination some iron ore of Monte Leone and Gravelli, it has been found to yield from 30 to 40 per cent. of iron. The ore of Tolfa yielded 60 per cent., which is 10 per cent. more than the far-famed ores of the mines of Elba.

An association for the promotion of free trade has been formed at Havre—but it declines to go all the length of the Parisian association. The Havre free traders think that, instead of attacking the existing monopolies altogether, it would be better to single out the greatest of them—that of iron—and endeavour to develope it first of all; and on the accomplishment of that, to take in hand the others. They say that Cobden, and his associates, did not attack all monopolies,—but confined themselves to an onslaught on the Corn Laws. There is a great deal of selfishness, no doubt, in the Havre free traders wishing the free trade crusade to be confined exclusively to the monstrous monopoly on iron, for it weighs heavily upon them as shipowners—whilst in many other monopolies they have an interest either direct or indirect. But, notwithstanding this, I am very much inclined to think, that it would be sound policy for the free trade partisans to content themselves for the present with following the course indicated by the Havre people. The iron monopoly weighs upon every trade, every occupation, every class, every individual. It takes something from every man's pocket, and completely ruins the shipping interest. Attack it then, and it only, and you would see all classes, all industries, leagued against it. Its hand being against every man, every man's hand would be against it. A storm of reprobation, so strong, so terrible, might be raised against it, that it could not possibly resist. The little knot of individuals who benefit by it, could do nothing against the whole nation. But when the free trade leaders break their lances against *all* protection to native industry, they not only frighten the timid, but unite against themselves every branch of industry, which has any real or fancied reason to dread foreign competition. Thus, they have to fight, at the same time, against the linen manufacturers, the calico manufacturers, the stocking-makers, the woollen manufacturers, the coalowners, the ironmasters, and the representatives of I know not how many other different trades. Isolated, each of these is weak and incapable of resistance; all united, they make a formidable phalanx. Would it not be wise then to encounter them singly, instead of in, attacking all at once, to force them to unite? Would it not be good policy to get their assistance in beating down the common enemy; and then, but not till then, knock them down too? I know full well that it is more courageous, more noble, more chivalrous, to belabour the whole citadel of monopoly, in spite of all its strength. But though such an enterprise be very tempting to the young and enthusiastic soldier, the old and wary general will prefer to gain a speedy and certain success, by conquering bit by bit, and in detail. It is to be hoped, then, that the leaders of the free trade movement will show that they are cool and wary; that they prefer the solid advantages of a partial success, to the empty glory of a great and terrible struggle. It is to be hoped, I say, that they will prove themselves practical men of business, and not visionary Don Quixotes. In that case, most certainly, they would soon have the satisfaction of wringing the neck of the infamous iron monopoly.

In a recent letter, some quotations were made from a printed communication, showing that, in a few years, France will find it a matter of immense difficulty to supply coal for her railways alone. Another communication from the same pen shows, that the difficulty will be as great, nay greater, as regards steam navigation. In 1844, France had 19 steam-vessels in the Channel, 8 in the ocean, 31 in the Mediterranean, 180 in rivers. At present she has 247 steam-vessels, of 13,260 horse power. It is calculated that these vessels do not employ their steam-power oftener than one day in five. Adding the mercantile marine, and allowing 5 kilogrammes of coal per horse per hour (rather less than the average consumption, proved by repeated experiments), there are required for this year 6480 metrical quintals of coal per day, or 2,365,200 for the whole year. Of this quantity, the national marine requires 1,203,624 metrical quintals, which will cost 3,538,655 fr., and the greater part of which will be drawn from England. In the event of war, it is asked, what will the French Government do for coal? And even if there be no war, the continually increasing demand for that article, with scarcely any perceptible increase in the domestic supply, will, before long, become a matter of anxious solicitude to the Government of this country.

Week after week is wearing away, and yet nothing occurs to show that the Government has any intention to alter the present monstrous duties on iron. It talked about the matter a little while ago, but the talk (as most people expected) ended in nothing. This is a scandalous shame. The shipping interest is in a most cruelly depressed state, and is galloping headlong to total ruin. Nothing can save it but a free admission of foreign iron, and yet not the slightest concession is made to it. As to the other interests, affected by the ironmasters' monopoly, they have, I think, as much chance at present of obtaining relief from the Minister of Commerce as they have of obtaining the moon from heaven. The Minister is represented to be a well meaning man in his way. Unluckily, he has the misfortune to be at the head of a cloth manufactory; and, as a cloth maker, he loves monopoly right dearly. The desire to keep up the monopoly on cloth has, no doubt, great effect in inducing him to maintain the duty on iron; for although he has no great reputation for intellect, he has sense enough to fear that, if he once gave the people cheap iron, they would soon clamour for cheap cloth.—*Paris, Tuesday.*

THE ELECTRIC LIGHT.—A patent has been secured by Mr. W. Greener, of Birmingham, and Mr. Staite, of Peckham, for an improvement in the means of obtaining light from electricity. Carbon and platinum are here employed after the manner of King's patent; but the patentees state, that carbon in general gives out various extraneous matters, which interfere with the continuity of the light, and darken the glass vessel by the deposit on the same; and from plane surfaced platinum, only a feeble light is obtained: they, therefore, digest lamp black, or pulverised coke, in nitro-muriatic acid, strain, and repeatedly wash, and finally form it into cylinders, or prisms, by a hydraulic press, and then bake in an intense heat for 24 hours. Numerous acute points are then formed on the surface by means of a saw, or by casting them in suitable indented dies; and these accuminated surfaces maintain a steady light, without abatement. In some cases thin strips of charcoal, separated by platinum foil, and bound together with platinum wire, are used; and when platinum or other difficultly fusible metal is employed, as many points are formed upon the surfaces as possible; and the patentees claim these rough surfaces, the purifying of carbon, and the joint use of carbon and platinum.

APPARATUS FOR SUPPLYING STEAM-BOILERS.—Mr. John Lord, of Birmingham, has obtained a patent for a perfectly self-acting apparatus, for supplying water to steam-boilers: it consists of a hollow spherical chamber, connected by two pipes with the upper part of the boiler, and by another with the pipe leading from the cistern of the well, whence the water is obtained—these all terminate in a box hinge joint, and the weight of the chamber full of water is just counterbalanced by a weight attached to a cord running over pulleys. There is a small cock on the top of the chamber to let out the atmospheric air, on commencing to use the apparatus. Upon the fall of the water line in the boiler, steam will pass from the boiler along one passage into the upper surface of the chamber, and drive the water through the other passage into the boiler: the chamber thus being lightened will be drawn up by the weight, which cuts off the communication with the boiler: as the steam condenses, a vacuum is formed, and water rushes up from the cistern, and fills the chamber, being prevented from returning by a valve; the chamber then descends by its weight, opens the passage to the boiler, and the operation is repeated as before, and the boiler can be thus regularly supplied, without the aid of a pump.

MINERAL WEALTH IN NEW JERSEY, U.S.—Although no State for its size has more colleges and seminaries of learning, or bears a higher character for national fidelity in trying times and enterprise, than New Jersey, yet it has in a measure neglected proper geological surveys, and is full of mineral riches, chiefly copper and zinc. Her zinc mines have been known for nearly a century, though until recently their value has not been made known. The principal deposit is 4 to 6 ft. thick, about 600 ft. in length, and could be explored easily to the depth of 100 ft., containing ore worth not much less than two millions of dollars, at the present market price of metallic zinc.—*American Sun*

NUMBER OF MINES IN THE SEVERAL MINING COUNTIES.

It would, doubtless, be a work of considerable difficulty to obtain an exact return of all the mines in the kingdom; but the following list, however, in round numbers, may be taken as a near approximation to correctness:—

CORNWALL & DEVON	Tin, copper, lead, iron, zinc, and antimony	350
DERBYSHIRE & STAFFORD	Coal, salt, lead, iron, copper, zinc	150
WORCESTER & LEICESTER	Coal, salt, lead, iron, &c.	100
WARWICK, GLOUCESTER & SOMERSET	Coal, lead, iron, manganese, &c.	100
NOTTINGHAM, LINCOLNSHIRE, and SHROPSHIRE	Zinc, coal, iron, lead, and gypsum	50
CHESTER & STAFFORDSHIRE	Coal, lead, iron, and salt	120
LANCASHIRE & YORKSHIRE	Coal, lead, silver, iron, &c.	100
WESTMORELAND & CUMBERLAND	Lead, copper, silver, antimony, zinc, & iron	100
DURHAM & NORTHUMBERLAND	Coal, iron, lead, &c.	100
WALES	Coal, lead, zinc, and copper	200
SCOTLAND	" " " " "	150
IRELAND	" " " " "	250
Total		1770

IRON TRADE OF SCOTLAND.

Our correspondent, to whom we are indebted for much valuable information, in forwarding the accompanying, says—"I now inclose a few additional particulars of the iron trade of Scotland, as it at present stands, for insertion in your Journal, which, I am sure, are very nearly correct: this will be followed, in a short time, by a detail of our malleable iron-works, after I have personally visited them all. I would direct your attention to the East of Scotland Joint-Stock Malleable Iron Company [see *Mining Journal* of 26th Sept.], who intend to build works at Dunfermline, Fifeshire: report says, that the pig-iron made at Forth Iron-Works, near Dunfermline, is very well adapted for making bar-iron; but I will make more minute inquiry, and let you know. I understand all the shares have been applied for, principally by Fifeshire people, and are to be allocated this week."

AVERAGE PRODUCTION OF EACH FURNACE.

1805	25 tons weekly.	1844	107 tons weekly.
1825	33 to 34 "	1845	107 to 108 "
1843	106 to 107 "	1846	110 "

EXPORTED in 1844	*Tons*	62,488
" in 1845		54,671
" in first six months of 1846		54,077
" coastwise, during same period		115,472
" in 1845, from Glasgow		30,562
" in 1845, from Liverpool		24,109

AVERAGE PRICE OF No. 1 PIG-IRON, NET CASH, FREE ON BOARD AT GLASGOW.

	1844.	1845.	1846.
January	£2 0 0	£3 0 0	£4 0 0
February	2 5 0	3 10 0	3 17 6
March	2 10 0	5 0 0	3 10 0
April	3 5 0	5 0 0	3 6 0
May	3 5 0	4 5 0	3 10 0
June	3 5 0	3 3 0	3 8 0
July	3 0 0	3 5 0	3 2 6
August	2 15 0	3 2 6	3 16 0
September	2 10 0	3 15 0	3 15 0
October	2 12 6	4 0 0	—
November	2 10 0	3 15 0	—
December	2 15 0	3 15 0	—
Price, or average	£2 15 6	£3 16 0	£3 11 8

EXPORTS OF PIG-IRON.

Countries.	1845.	Jan. 1 to June 30, 1846.
United States *Tons*	25915	1812
British America	5391	4445
West Indies	100	30
South America	250	—
New South Wales and India	734	35
Italy	1795	980
Spain	212	643
Portugal	198	110
France	10674	21061
Belgium	—	95
Holland	4068	13103
Germany	3743	8660
Denmark	572	3013
Sweden and Norway	92	90
Egypt and Turkey	565	—
Austria	189	—
Jersey	130	—
Africa	70	—
Russia	20	—
Total foreign *Tons*	54,671	54,077
Total coastwise		115,472
Both together *Tons*		169,549

FURNACES IN BLAST, 31st Dec., 1844		69
" " 31st Dec., 1845		87
Computed make in 1844	*Tons*	340,000*
Increase in 1845		60,000
Computed make in 1845	*Tons*	400,000
Computed stock at Glasgow, 31st Dec., 1845	*Tons*	210,000
" " " 30th June, 1846		140,000
Decrease for same period	*Tons*	70,000
Furnaces in blast, 31st Dec., 1845		87
" " 30th June, 1846		97
Computed make for six months, ending June 30, 1846	*Tons*	260,000

* 1750 to 2000 tons consumed weekly in Scotland for malleable iron.

SALES OF COPPER ORE, AT SWANSEA, FROM THE MINES OF IRELAND.

FOR THE QUARTER ENDING SEPT. 30, 1846.

Mines.	*No. Ticketings.*	*Tons.*	*Amount.*
Berehaven	7	2202	£15565 14 0
Knockmahon	6	1597	9393 11 6
Ballymurtagh	6	1288	3675 10 6
Cronebane	3	525	2246 11 6
Cosheen	1	46	820 0 0
Tigrony	3	194	547 12 6
Victoria	1	303	457 5 0
Lackamore	1	32	251 15 0
Ardtully	1	52	214 10 0
Dhurode	1	30	210 15 0
Ballygahan	1	56	175 0 0
Total *Tons*		6325	£33,558 5 0

INVENTION OF THE SAFETY LAMP, THE CLANNY TESTIMONIAL.—In our advertising columns will be found the appeal of the Sunderland committee, for obtaining subscriptions for the purpose of presenting to Dr. Clanny a testimonal for his exertions in endeavouring to prevent the deplorable loss of life in collieries, by his invention of the safety lamp, and his continuous investigations since, at considerable pecuniary sacrifice, to improve the lamp, and render it a safe and certain antidote. We have, on various occasions, alluded to the fact of Dr. Clanny's steam lamp having been the first attempt to keep the flame out of the influence of the fire-damp; and, as announced in the advertisement, subscriptions will be received at the *Mining Journal* office, 26, Fleet-street, and all communications forwarded to that address will meet with every attention. We have been requested to make the following addition to our last notice on the Clanny lamp:—"That his steam safety lamp was the first self-feeding lamp ever put to use on that principle; and for the said safety lamp, Dr. Clanny had the honour of receiving the largest gold medal of the Society of Arts, in London, and which discovery is by many years anterior to the recent so-called discovery of a French gentleman—viz.: the overcoming gases of mines by the medium of steam." It is worthy of remembrance, that explosive atmospheres, such as we find in the English coal mines, are rendered harmless when they are, *in transitu*, mixed with steam, as was well verified in Dr. Clanny's above-mentioned steam safety lamp; for we have learnt the following fact—that, in the steam safety lamp (which, many years ago, was employed in some of our most dangerous coal mines), its apertures were at least one-eighth of an inch in diameter, and which, in safety, might have been still more enlarged. In this safety lamp the flame was uniform and bright, and continued very steady till the oil of the oil lamp was consumed; there was no soot, nor foul accumulations. In the lapse of time these facts are, probably, lost sight of—yet they may, even now, be put to use upon an extensive scale, in order to get rid of the industrious pitman's greatest enemy—fire-damp. We need hardly add, we wish the committee every success.

THE METALLURGICAL TREATMENT OF ORES.—No. X.

TREATMENT OF THE ORES OF SILVER.

Silver has been known from the earliest ages of civilisation, doubtless, on account of its occasionally occurring in the metallic, or native, state. From the ores, in which this metal is found in a state of chemical combination, it can be readily extracted by means of repeated roastings, which free it from the substance, or substances, with which it was combined; hence it can be readily conceived, that even preliminary trials would enable us to extract a portion of the contained silver—in a slovenly way, it is true—but, nevertheless, in such a manner as to produce comparatively profitable returns from rich ores. In some workings, silver is obtained as a secondary product; in others, it forms the principal object. The ores, which furnish silver as a secondary product, are the argentiferous sulphurets of lead, and the argentiferous copper pyrites. In such cases, the ore is termed silver-lead, or copper ore; but when the proportion of silver considerably increases, the ore is termed silver ore. Silver occurs either native, or in combination; the compounds which this metal forms are very various. Native silver affects many forms—sometimes it crystallises in regular cubes, or octohedra; sometimes in dendritic, or twisted fibres; and sometimes in masses, or grains, of various sizes. Some of these masses have occurred of such a size, as to weigh from 50 to 200 lbs. Sulphuret of silver, antimonio-sulphuret of silver, antimoniuret of silver, and chloride of silver, are the principal ores which, either in a state of purity or mixture, furnish our supplies of the metal in question. The ores of silver are generally found in the primitive formations, and commonly in fissures of the micaceous rocks. The secondary formation also contains silver ores; but they are generally *native silver, and not its compounds.*

Various processes are employed in the treatment of silver ores; but they may be all reduced to one simple principle—viz.: the formation of an alloy of silver with some other metal, which alloy shall be very fusible, and so heavy, that it may be readily separated by subsidence from the earthy matters with which the silver was mixed. The metal commonly employed is mercury, and the process constitutes the method by *amalgamation.* The amalgam of silver, being fusible at ordinary temperatures, can be readily collected without heating the mass, and, from its great specific gravity, can be readily separated by washing. The amalgam is then submitted to distillation—the mercury, being volatile, is driven off—and the silver alone remains in the distillatory apparatus. In spite of the high price of mercury, this method seems to be the most advantageous, when poor ores are worked. Sometimes lead is employed. The alloy of lead and silver is fusible only at a high temperature—hence the whole mass of ore and lead must necessarily be heated; the alloy thus produced runs out of the mass, and is collected. The silver-lead thus obtained is then submitted to a refining process, which separates the lead as oxide (litharge), and leaves the silver in the metallic state. This method can only be employed for very rich ores, especially those in which native silver predominates. An operation, which is made the basis of a third system of working, is known under the name of the *concentration* system. It has for its end the concentration of the silver contained in the ore to the smallest possible volume. It consists in a fusion with iron pyrites, by which fusion the pyrites added forms a fusible matt, in which all the silver in the ore collects—this matt, separated from the slag, is submitted to an ulterior treatment for the separation of the silver. There is yet another method in which the ore is roasted, so as to obtain either a sulphate of silver, or a chloride of silver; these are subsequently dissolved from the roasted mass, either by hot water or a hot solution of salt, and the silver is obtained finally from these solutions. We will examine these methods in succession. The process of amalgamation may be divided into two classes. The one comprehends the method employed in Europe—the other that in use in the American mines. Various mixed methods are also employed, which agree more or less with the two principal ones, which we shall carefully study.

Treatment at Freyburg.—The operations conducted at Freyburg are the following:—1, a sorting and suitable mixture of the ores employed; 2, roasting the above mixture, with the addition of salt; 3, sifting the roasted mass; 4, grinding the sifted ore; 5, amalgamation; 6, decantation of the amalgam; 7, filtration of the amalgam; 8, distillation of the amalgam; 9 fusion of the silver; 10, refining the silver; 11, washing the residual matters. We will examine the various operations in order, as regards them in a practical light, and as viewed theoretically.

1. *Sorting and Suitable Mixture of Ores.*—The ores treated at Freyburg, by the amalgamation process, are known under the name of poor ores; they contain little or no lead. These ores are divided into two varieties—those which contain no pyrites, and those mixed with iron pyrites. The ores containing lead or copper are excluded from this method of treatment. It is very rare, however, that the ores so worked do not contain traces of copper. The best richness for working is about 76 ozs. of silver to the ton of ore. It has been found by experience, that, if the ore be richer, the residual matters from the amalgamation are too rich; but, if the ore contain less than about 50 ozs. to the ton, it does not pay the expense of working. The mixture ought to contain about 34 or 35 per cent. of pyrites; and as the pyritous ores do not always contain a sufficiency of pyrites, some few per cents. of argentiferous pyrites must be added, in order to hit the exact proportion. According to the various modes of preparation the ore undergoes in the washing grounds attached to the mines, it is termed "washed ore," or "stamped ore." The ores of each mine, washed and stamped separately, are heaped up in the storehouse, and noted in a book, termed the "Ore Purchase-book," together with the quantity of silver each heap contains. A sufficient quantity of ore, to form a heap of 20 tons in weight, is then taken from each of the before-mentioned heaps in the requisite proportions. The quantity is calculated from the richness of each heap of ore, so as to obtain a mass the mean richness of which is 0·0024 of silver. According to Berthier's analysis, the mixture thus prepared contains—Quartz, sulphate of baryta, &c., 27·8; carbonate of lime, 5·0; carbonate of magnesia, 3·0; carbonate of manganese, 4·2; carbonate of iron, 4·5; carbonate of copper, 1·2; carbonate of lead, 4·0; bisulphuret of iron, 28·5; mispickel, 19·8; silver, ·2 = 98·2. The silver in this mixture exists, at least partially, in the state of sulphuret. The high temperature employed in the roasting, together with the presence of pyrites, causes the silver to entirely assume the state of sulphuret. Under this form the amalgamation could not proceed—at least, by the Freyburg process. It is necessary that the silver be reduced to the state of chloride, which is further reduced to the metallic state by the addition of iron. In order to convert the silver into chloride of silver, the ore to be roasted is mixed with common salt. Numerous trials have proved that 10 per cent. of salt produces the most advantageous results. The complete mixture of the ore with the salt is effected by passing them through a sieve—this mixture is made in the "preparing rooms;" above these rooms are the salt stores. To pulverise the salt, it is placed in wooden boxes with conical bottoms, which pass through the ceiling of the room; this bottom can be opened and closed by means of a sliding door. Above these boxes are suspended iron sieves, upon which the salt is thrown, and on which any compact masses that may be formed are broken up. In each box a certain weighed quantity of salt is placed; it then falls into the mixing rooms, on the floors of which part of the mineral is spread; the salt is then placed evenly upon it, and above that again another layer of ore, and another layer of salt, until the requisite quantities have been employed. The ore and salt are then passed through a sifting machine, and the produce divided into 10 heaps, which are termed the roasting heaps.

Roasting.—Below the mixing rooms are placed the roasting furnaces. They are reverberatory furnaces; the principal parts of which are—1, the fire-place, with bars and ashpit; 2, a hearth, on which the ore is roasted; 3, condensing chambers, through which the vapours escaping during the roasting pass, and where a portion of very finely divided ore, which has been carried away by the draught, is deposited; 4, a chimney, by which all incondensible vapours pass off. A charging aperture is placed in the roof of each furnace, from whence it passes into the mixing rooms, where it is provided with a cover. The principal furnace opening is in the front, and it is there where the ore is worked by the aid of long iron instruments, which, in order to facilitate their use, rest upon a cylinder of iron in part of the furnace, which cylinder turns upon an axis. The instruments employed by the workmen are—1, an iron rake or rable; 2, a stirring shovel; 3, an assay spoon. The fuel employed is coal. To commence a roasting, the workman entrusted with this employment throws upon the furnace-hearth, by means of the tube above described, one of the heaps of ore upon the floor of the mixing room above. It is spread evenly, and any lumps, which may form by the action of the heat employed, carefully broken. At first such a fire is kindled that is just sufficient to dry the ore, and cause the salt to decrepitate—during which time the workman stirs the whole mass with the before-mentioned iron rake. This time is termed the com-

mencement of the roasting. When the ore catches fire, which is generally in about an hour, the fire is diminished (the inflammation of the ore is owing to the sulphur contained in the iron pyrites); at this time the whole mass is red, and appears fluid. During this time it is necessary to continually turn and turn the ore, in order to prevent the formation of lumps. The following transformations now take place—the sulphur of the pyrites oxidises, forming sulphurous and sulphuric acids, which last acid decomposes the common salt added previous to the roasting, with the formation of sulphate of soda; the chlorine of the salt thus decomposed combines with the silver in the ore, giving rise to a chloride of that metal. Oxides and sulphates of copper and iron are also formed. The roasted ore also contains unaltered earthy matter. The third, and last, period of the roasting commences when the surface of the ore begins to cool, and the formation of sulphurous acid gradually diminishes. During this operation the whole, or at least 85 per cent., of the silver contained in the ore is converted into chloride. If the ore were roasted without the addition of salt, half of the silver only would be converted into sulphate of silver. (These remarks must be borne in mind, because they will be of much importance, when we consider the last cited process for obtaining silver from its ores by solution.) This mass is heated afresh, with continuous stirring, until a greenish grey vapour is given off, which smells of chlorine. If, on making an assay of this in the iron spoon, no smell of sulphurous acid is perceived, but only that of chlorine, it may be concluded the roasting is finished. Six hours are generally requisite for roasting a heap of 4½ cwts. It is clear, that the fewer lumps the roasted ore contains, and the more uniform and brown its colour, the better it is roasted. The ore, still in a state of red heat, is drawn from the furnace by means of the rake. The condensing chambers are cleansed every five months. There are then found above each roasting furnace about 5 cwts. of finely-divided ore, which contains about 2 or 2½ ozs. of silver per cwt. This powder is re-roasted with its own weight of crude ore, and 10 per cent. of salt. The powder and soot disengaged during the roasting have the following composition:—

	Powder.	Soot.
Pulverulent ore	90·000	5·000
Coal soot	0·000	10·000
Arsenic	9·000	0·000
Arsenious acid	0·000	85·000
Silver	0·143—99·143	0·072—100·072

The roasting process is carried on uninterruptedly night and day, and from 48 to 50 cwts. of coal are required to roast 100 cwts. of ore. In the amalgamation rooms there are 14 roasting furnaces.

2. *Sifting the Roasted Ore.*—Whatever care may have been taken in the roasting, the formation of some lumps of ore cannot be avoided; these lumps have only been superficially roasted—therefore, it is necessary to separate them from the pulverulent ore, and roast afresh. For this purpose the roasted and cooled ore is placed in boxes, and drawn up to the third story of the works by means of a crane, where it is received in tolerably coarse sieves, and deprived of all hard lumps proceeding from the roasting, as well as fragments of the furnace, &c. The hard lumps thus separated are broken up, and re-roasted with 2 per cent. of salt. The ore thus treated is passed through passages on to the second stage, where it is placed in sifting machines. These machines consist of large wooden boxes, in which two iron wire sieves were alternately in opposite directions. Each of these sieves has two compartments, the one finer than the other—the ore is thus divided into fine, middling, and large ore. This operation is essential, because each kind grinds more readily when separate, and because the large ore, which is not yet sufficiently roasted, must be re-roasted with the hard lumps separated in the first operation, with the same addition of 2 per cent. of salt. From 5 tons of roasted ore, about 2 cwts. of large, 9 to 10 cwts. of middling, and from 87 to 88 cwts. of fine ore are obtained. Eight hours are required to sift 5 tons of ore. There are two sifting chambers, in each of which there are two sifting troughs.

3. *Grinding the Roasted Ore.*—In order to reduce the ore to the finest possible powder, it must be submitted to a last preparatory operation—viz.: that of grinding. The more care bestowed in this operation the better the amalgamation proceeds. The mills are exactly below the sifting chambers, and are constructed like ordinary flour mills, with this exception, that the stones are granite. When the grinding commences, the fine and middling ore pass separately by tubes into the grinding rooms, where they are received into two large boxes, from whence they can be directed at will under the stones, where they are reduced to a very fine flour—that portion which will not pass the bolter is re-ground.

4. *The Amalgamation.* Boxes, each containing 1 cwt., are filled with the finely-ground ore; they are then raised, by means of a crane, to the second stage, from thence they are carried to a store-house. In this store-house are 20 boxes, each capable of containing 10 cwts. of ore. Immediately below is the amalgamation room, where 20 wooden casks, firmly hooped with iron, revolve horizontally on the axis by means of a water-wheel. Each cask has a bung hole, by which it may be filled, and each hole is closed with a bung, which screws tightly into the cask by means of an arched iron; each cask weighs about 14 cwts. All of them can be either set in motion, or stopped, by an appropriate apparatus, and each can be stopped separately, by removing one of the supports of the spindle by a screw. Each cask has a separate leather pipe from one of the chests above the amalgamation room, containing the powdered ore.

[*To be continued in next week's Mining Journal.*]

PATENT MINE DRAINER AND WATER LIFTER.—We have before us a prospectus of a company, for manufacturing and letting to the adventurer a new machine for draining mines, quarries, &c. The capital is to be 150,000*l.*, in 30,000 shares, of 5*l.* each; and estimating the number of mines of all descriptions in the United Kingdom at 2070, and machines to be used for quarries, clay pits, for farms irrigation, colonies, &c., at 1900—making a total of 3970—at an average rental of 10*l.* per month, the estimated profit, in the third year, will be 720,000*l.* We have not seen any description of the apparatus—consequently, we are not aware of the principle, whether it is entirely novel, or a new application of some of the pump systems; but it appears from the prospectus, that a 3-inch retort will raise 3600 gallons per hour; and, as doubling the diameter of the retort quadruples the cubic contents, we find that, according to this proportion, a 24-inch retort would discharge 230,400 gallons per hour. The prospectus describes the facility by which this machine can unwater mines; but, until we see the apparatus, it is impossible to say more on the subject.

NEWBRIDGE AND TAFF VALE COLLIERY.—In our advertising columns will be found a prospectus of the above colliery, which is situate in the parish of Llanwonnow, in the county of Glamorgan. The property consists of 360 acres, in the centre of the well-known South Wales mineral basin, and held under lease for 31 years. It is 12 miles from Cardiff, and the Taff Vale Railway runs through it. There appears to be three veins or seams of coal—making, in the aggregate, an average thickness of 10½ ft., and capable of yielding 5,000,000 tons. The cost of raising the coal, we understand, will not exceed 6s. per ton; and thus, at the moderate charge of 8s. 6d. per ton, an annual profit of 7500*l.*, by working one pit only, producing 200 tons per day, will be realised; but it being calculated that this amount of working would not raise one-third of the coal by the expiration of the lease, it is proposed to open at least two more pits, which would realise to the company, assuming the price above-mentioned to continue in proportion to the cost of raising, of which there is no reasonable doubt, a clear profit of 30,000*l.* per annum. It is proposed that the colliery shall be carried on under the Cost-book System, the shareholders to be secured from all liability, except to the proportionate amount of their shares; and the lease and legal titles vested in trustees for the benefit of the proprietors. The entire capital required for working the colliery is 20,000*l.*, in 2000 shares, of 10*l.* each.

GLYN COLLIERY.—Two shopkeepers of Merthyr, named I. Williams, and W. Jones, are likely to find an *El Dorado* in the Cwm Rhondda. In the neighbourhood of Cymmar, about four miles west of Newbridge, they have lately opened a colliery—the coal of which is of an excellent quality, and the vein 4 ft. thick.—*Monmouthshire Merlin.*

If affords us much pleasure in being able to recommend Markwick's patent epithems. The impermeable pilline will be found to constitute one of the most available chest protectors ever invented, and will no doubt prove an admirable auxiliary to the hydropathic system, and an extremely useful application in cases of rheumatism, &c., &c., &c.—we have no hesitation, therefore, in recommending it. The impermeable spangle pilline is intended for applying warm fluids to the surface of the body. The immense quantity of fluid it holds, and the great length of time it retains its heat, must render it far superior to hot poultices and fomentation cloths, for which it forms a very excellent substitute; it will, we doubt not, be greatly sought after by the profession and the public. These epithems are also admirably adapted for persons employed on railway stations, as well as travelling, for wharfs, &c.—in fact, all those exposed to cold and wet.

CONSOLIDATED PATENT KAMPTULICON COMPANY.

Established 1843.—To be Incorporated by Act of Parliament.

Capital £50,000, in £10 shares, paid in full, bearing interest at the rate of 5 per cent. per annum, with a moiety of the profits divided as a bonus.

Those proprietors who have not exchanged their original for consolidated shares, are requested to do so previous to the meeting, advertised to be held on the 26th instant—*extensive foreign and other contracts* requiring the resolutions of January last to be carried into immediate effect.

P. G. GREVILLE, Secretary.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY.....Great Eastern and Western Railway—London Tavern, at Two.

TUESDAY.....Patent Galvanised Iron Company—London Tavern, at Two.
South Maria Mine—Cornish Arms, Gunnis Lake, at Eleven.
Madrid and Valentia Railway—London Tavern, at One.

WEDNESDAY...Independent Gas-Light and Coke Company—London Tavern, at One.
Exeter, Yeovil, and Dorchester Railway—London Tavern, at One.

THURSDAY.....Birch Torr Mining Company—at the mines.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

CAMERON'S COALBROOK STEAM COAL AND SWANSEA AND LOUGHOR RAILWAY COMPANY.

The first general meeting of the proprietors of this company was held on Wednesday, the 14th inst., at their offices, 2, Moorgate-street, City.

JACOB MONTEFIORE, Esq., in the chair.

The advertisement convening the meeting having been read,

The CHAIRMAN, in a few words, addressed the meeting as to the more immediate object for which the proprietors had been called together—that of receiving officially from the directors the communication that the Act of Parliament, authorising the company to construct a railway from the collieries of the company to Swansea, had been obtained; such, however, would be better conveyed by Mr. Elderton (the solicitor of the company), to whom it was only due, to observe, as well as to the Parliamentary agents, and to Col. Cameron, more especially, the shareholders were indebted for the success which had attended their labours, despite the opposition with which they had to contend, and which he could assure the meeting was somewhat of a formidable character; however, they had achieved their object, success had attended their endeavours; and last, not least, he might, without egotism, advert to the labours of the directors, of which body he had the honour to be one, and their representative on the present occasion. He should be happy to afford to the proprietors present any information they might require, as regarded the state of the company's collieries, and the prospects which presented themselves, which, he was happy to say, were of the brightest character, but such had not been entered upon in the report to be submitted—the meeting being strictly confined to the provisions of the Act, as affected the railway. The solicitor would, however, fully explain the object for which they had assembled, and he should be happy afterwards to answer any questions which might be submitted, or to afford any information in his power.

The SECRETARY (Mr. Howden) read the report of the directors:—

REPORT.

In accordance with the provisions of the general Act of Parliament for the regulation of railways, and of the special Act authorising the construction of the Swansea and Loughor Railway, the directors have convened the present general meeting of the shareholders at the earliest possible period; and they have now the satisfaction to announce to them the passing of the Act of Parliament incorporating this company, and authorising the construction of their proposed railway, with the usual powers. The increasing supply of coal which the manager is now enabled to give, and the extension of the company's works, call upon the directors to give their best attention to the expediency of immediately constructing the railway, which, being only 4¼ miles in length, and, for the present, limited to one line of rail, they have every reason to believe it can be constructed at a cost considerably under the estimate. The directors have to assure the shareholders, that their operations, in this respect, will be conducted upon the strictest principles of economy in the expenditure; and, at the same time, with a due regard to the interests of the shareholders. In order that the future yearly and half-yearly meetings of the shareholders, as prescribed by the Act of Parliament, may be in unison with the deed of settlement of the company, the directors suggest that these meetings shall be held in January and July yearly, and that the directors of the coal company and of the railway company shall be the same, and shall be elected in conformity with the provisions of the deed of settlement.

Mr. ELDERTON briefly addressed the meeting, observing that it was virtually one of a formal character, being convened under a general Railway Act, passed for the purpose of regulating all railways, so as to enable the directors to report to the shareholders the result of the proceedings in Parliament, and furthermore to place them in a position of electing future directors. He proceeded to explain the particular Act of Parliament under which the company was incorporated, and which (he observed) had been obtained after a most severe struggle in both Houses of Parliament—there being seven petitions in the Commons, all of which were neutralised, with one in the Lords—which latter, at the late period of the session, when it was presented, would have defeated the bill, but for the exertions made by the board of directors, the Parliamentary agents, and Col. Cameron—while, he might add, he had lent his humble services, which combined had secured its success. One result of the Act of Parliament having been obtained, was that of the company being incorporated in a double character—namely, under the recent Act of Parliament, whereby it was, as affected the construction of the railway, incorporated, and under the Joint Stock Company's Act, in regard to the company generally, also incorporated, so that the company was, in fact, doubly incorporated. The learned gentleman then adverted to the election of directors, and observed that, at the general meeting held in July last, in conformity with the deed of settlement, the present directors were appointed to remain in office until July, 1847; while he submitted to the meeting the expediency of perfect unanimity, with reference to the proceedings of the company under the circumstances observed upon by him, on the part of the shareholders,—and would, therefore, counsel them that the present meeting do, in all respects, confirm the proceedings and resolutions passed at the meeting held in July. The necessity of affixing the corporation seal to the share register book, was an Act necessary, conforming with the Act of Parliament, in regard to which a resolution would, doubtless, be passed; while, in conclusion, he congratulated the company on the result of the Parliamentary labours, which, he could only say, were most gratifying to the directors and to himself.

Mr. SMALLBONE expressed the satisfaction with which he had heard the remarks of the chairman, and the explanation afforded by their worthy solicitor, to whom he considered the thanks of the proprietors were due, as well as to the directors, for the zeal they had manifested, and, more especially, to Colonel Cameron. He (Mr. S.) had never entertained a doubt as to the value of the property, nor the advantages which, after deliberate reflection, he considered they were entitled to expect—indeed, the information he had derived from parties who had visited the property, and the increased interest they had taken in the capital of the company, was the best assurance of its stability. He represented a considerable interest in addition to his own holding, among whom were many members of the Stock Exchange. On behalf of those who were absent, and not from any doubt which might arise in his mind, he begged to ask, whether some experiments were not being made by her Majesty's Government at this moment, to test the quality of the coal; and, moreover, he would be glad to be informed, whether he was right in assuming that measures had lately been taken by the directors to increase their force, and to prosecute the work with that energy and spirit which the undertaking merited; so, by an increased supply, to be able to meet the forthcoming and increasing demand.

The CHAIRMAN, in reply, observed that it would be, perhaps, satisfactory to the meeting, to hear read a letter received that day from Mr. Taylor, their manager; that gentleman would have been present, but it was considered, under the circumstances adverted to by him, to render it unnecessary. As related to the experiment, Mr. Howden (the secretary) would satisfy the hon. gentleman, as to the measures which had been pursued, and which, he was happy to say, promised well.

Mr. HOWDEN (the secretary) proceeded to read a letter from Mr. Taylor, bearing date the 12th inst., in which, after expressing his regret that his presence would not be required at the meeting, such being only of a formal character, as relating to the railway, he, Mr. Taylor, observed, "That the progress of the works for the extension of the mines, so as to enable me to work coal up to 2000 tons per week, affords unabated confidence in the success of the company's undertakings," and thus continues: "I received the board's directions on the 9th of September, to prepare plans, specifications, and advertisements, for contracts. All this has been done, and tenders and estimates have been obtained for the whole work at rather under my original estimates, and only wait the decision of the board for my proceeding to complete the same. It may be gratifying to the meeting to know, that nothing has occurred, either in the colliery or otherwise, to alter the opinion I expressed at a previous meeting—that there is scarcely any limit, either to the quantity I can work from the mine, or to the quantity I can sell, when brought to Swansea."—Mr. HOWDEN proceeded to observe, that, as regarded the experiment referred to, it was true that the coal had been submitted to an experimental trial at her Majesty's Dockyard, at Woolwich, on Monday last; and that he had every reason to believe such to be highly satisfactory; but, as the directors were not in possession of the report from the Admiralty, and, moreover, as a further trial would take place in a few days, he did not feel himself at liberty to enter further into the subject. The previous trials, however, made, and the present, as compared with other coal, fully warranted him in stating, that Cameron's steam coal would stand No. 1 as to quality, and, consequently, as to economy in its application, while it would afford to the shareholders a handsome profit.

Several observations were made as to the merits of the coal, and the prospects of increased sales on the workings being further opened—in the course of which Sir Andrew Green, Captain Norcott, Mr. Strelly, and others, took part; and the several resolutions, which will be found in our advertising columns, having been passed, the meeting adjourned.

DUFFRYN LLYNVI AND PORTHCAWL RAILWAY COMPANY.

A special general meeting of this company was held at the Wyndham Arms Hotel, Bridgend, Glamorganshire, on Friday, the 9th inst., "for the purpose of taking into consideration the acts, proceedings, and transactions of the committee, since the annual general meeting, held in June, 1845, and especially for confirming an agreement made with the Llynvi Valley Railway Company, for the amalgamation of the two companies; and, generally, for transacting any business which could be brought before any annual general meeting held under the powers of the company's Act of Parliament; also, to declare a dividend for the half-year ending 30th April, 1846."

Sir DIGBY MACKWORTH, Bart., in the chair.

The Rev. R. KNIGHT having protested against the meeting, as improper and illegal—Mr. W. S. BRADLEY (the secretary) read the following

REPORT.

The committee of the Duffryn Llynvi and Porthcawl Railway Company have much satisfaction in reporting to the shareholders their proceedings during the past year. They have been engaged in an arduous and expensive contest, which has terminated in an amicable and satisfactory arrangement. In pursuance of the resolution passed at a general meeting of the proprietors, your committee used their best exertions to carry out the important extension of the Porthcawl Railway, under the title of the Glamorgan Central Mineral Railway. The failure of that project is in a great measure compensated by the intended amalgamation of the Porthcawl line with the Llynvi Valley line, which must ultimately lead to the full accomplishment of the more extended scheme. The terms of that amalgamation are favourable to the shareholders in the Porthcawl Railway, the whole of the revenue being reserved to them until the Llynvi Valley line is completed; and provision is made for the equitable valuation of the shares in the Porthcawl Railway, so that they may be adequately represented when the capitals of the two companies are united. The revenue of the Porthcawl Railway continues to increase, that of the last month (September) being 30 per cent. more than the average monthly revenue of the past year; and great additions to it will arise from the new works which have been established on the line, and the enlargement of the old works. It appears that the revenue for the half-year ending the 30th April last, was less than that of the preceding half-year. This was occasioned solely by two of the companies on the line having stocked at their works a large portion of their make of iron, which they are now sending down to the port; consequently the income of the company, after the 30th April, will be increased in the same ratio as it was previously diminished. Some considerable additions and improvements have been made at Porthcawl; a large amount has been expended in putting the railroad in an efficient state as a horse road. Your committee recommend that a dividend of 2*l.* 15*s.* per share be declared for the half-year ending April 30th, which, coupled with the dividend of 4 per cent. for the preceding half-year, amounts to 6¾ per cent. per annum. The present state of the road justifies the expectation that, while the future revenue will be much increased by great additions to the traffic, the current expenditure for repairs will be below the average of former years—consequently, much higher dividends will accrue. The finances of the company have been so trespassed upon by the proceedings connected with the Glamorgan Central Mineral Railway, and the opposition to the rival line (which will hereafter become an integral part of the Porthcawl Railway), that your committee recommend the present dividend to the credit of the several proprietors, to bear interest until the finances of the company are replenished. The expenditure in promoting the Glamorgan Central Mineral, and in opposing the Llynvi line, will both be taken into consideration by the referees in the valuation preparatory to the amalgamation.

The Rev. Mr. KNIGHT proceeded with a long and formidable series of objections to the proceedings of the committee, which were met *seriatim* by Sir R. PRICE and various members of the committee present; and, after a discussion upon the subject, of some hours' duration, and an amendment from Mr. KNIGHT, the following resolution was carried:—"That this meeting, having taken into consideration the acts, proceedings, and transactions of the committee, since the annual general meeting, in June, 1845, up to the present day, as recorded in their books, with the audited accounts to the 28th April last, and the committee's report, recommending a dividend of 2*l.* 15*s.* per share to be declared for the half-year ending 30th April, 1846, as read to this meeting, in lieu of the annual general meeting usually held in June, do approve and confirm the same."

Thanks having been voted to the chairman and directors, the meeting separated.

ROYAL MAIL STEAM-PACKET COMPANY.

On Thursday, a general meeting of this company took place at the London Tavern, to receive the directors' report, on the half-year's workings ending 30th June.—The chair was taken by THOMAS BARING, Esq., who congratulated the proprietors on the favourable prospects of the undertaking.—Capt. CHAPPELL, R.N., read the report, from which it appeared, that the directors had arranged with her Majesty's Government for an amended contract. The management and service of the vessels seemed to afford general satisfaction. Arrangements for transporting passengers and treasure across the Isthmus of Panama, had been completed. Increased cabin accommodation had been given, in consequence of the increase of passengers. The sum of 50,763*l.* 4*s.* was now vested as an insurance account. The working account showed an augmentation over the previous six months of 3863*l.* 3*s.* 1*d.* in the expenditure; but there had been an augmentation in the receipts also of 10,332*l.* 18*l.* 11*d.*—showing an increased surplus of 6469*l.* 15*s.* 10*d.* over the corresponding period of last year. The directors proposed an addition of 5*s.* per share to the dividend—making it for the half-year ending 30th June last, 1*l.* 15*s.* per share. The disbursements for the half-year were 146,123*l.* 6*s.* 3*d.*; and the receipts for the same period, 195,014*l.* 16*s.* 4*d.*—leaving a surplus of 48,891*l.* 10*s.* 1*d.*, or a net increase of 6469*l.* 15*s.* 10*d.*

The CHAIRMAN having moved the adoption of the report, Mr. RIDGWAY made several complaints against the management, though he considered the report as satisfactory. He alluded to the inconvenience passengers were put to from being shifted from one berth to another on their voyage, and to the bad quality of the wines. He also thought the report should be printed previously to the meeting, and complained of the smallness of the dividend now made, when their prosperity would enable them to pay at least 7½ per cent.; he concluded by seconding the adoption of the report.—The CHAIRMAN replied, and said, that the present dividend of 5*s.* was an increase of 3*l.* 10*s.* per share. He was pleased to hear the hon. proprietor complain of the smallness of the dividend when he was the first person at the very outset to speak evil of the company, and hold forth the most gloomy forbodings. With respect to changing the berths, it could not be helped in vessels calling at different places. The wines were certainly complained of; but the directors had since had the prices of two different wine merchants hung up, so that the passengers could choose for themselves. He thought there was an objection to printing the report before the meeting; for instance, here when a dividend was to be pronounced.—Mr. MONTAGUE complained of the expense of the establishment at Southampton.—The CHAIRMAN said, that arrangements were being made for dispensing with it.—Mr. C. MILLS said, they were now insuring their vessels at the rate of 2½ per cent. by their own capital. He concluded by moving a vote of thanks to the chairman and directors, which was seconded by Mr. POYNDER.—The CHAIRMAN returned thanks, when the meeting adjourned.

COMPOSITION OF THE GASES EVOLVED FROM IRON FURNACES.

A most elaborate paper was read at the meeting of the British Association (held at Cambridge, last year), on the above subject, from long-continued and carefully-conducted experiments by Dr. Lyon Playfair and Prof. Bunsen, which are highly confirmatory of the previous experiments of Sheirer and Langberg, in Germany. By these results, it appears that carbonic acid diminishes from the top of the furnace downwards, until it attains a minimum, when it again begins to increase, without, however, reaching the proportion which it at first possessed. The carbonic oxide attains its maximum about the middle of the furnace, and diminishes in a greater ratio upwards than downwards; the quantity of carburetted hydrogen remains constant in the upper part, and diminishes, though still relatively constant, in the lower region; and an irregularity in the quantity of hydrogen, probably caused by local influence, is observed at all depths. The following are the proportions of the several gases, taken at different heights in the furnaces, at which the experiments were tried—one in Germany, the other in Norway:—

The great accordance between these two series of experiments, renders it surprising that a similar inquiry, instituted by Ebelman on the furnaces of Creuzal and Andincourt, should have led to results essentially different—carburetted hydrogen is entirely absent, while the hydrogen is as great as 6 per cent. The report states, that it is well known that ordinary charcoal is very far from being pure carbon; and that it, in fact, contains about 20 per cent. of foreign matters, which escape as gaseous and liquid products, when heated to redness. If carburetted hydrogen form, as is generally supposed, an essential constituent of the gases resulting from the distillation of wood charcoal, it is quite clear it cannot be absent from the gases of furnaces supplied with that fuel. Although the presence of carburetted hydrogen in the gases obtained from the distillation of charcoal is generally acknowledged, they have put the fact beyond all doubt by renewed examination. The charcoal subjected to experiment was heated in a narrow glass tube, connected with a long dry tube, to retain the liquid products of distillation, and the gases, after passing through, were collected over mercury. In order to remove any elayl or hydrated oxide of methil, which might possibly have accompanied the gases, they were conducted through a long tube, filled with fuming sulphuric acid, attached to which was another tube, moistened with water. A specimen of very well burnt charcoal from beech wood, yielded a gas of the following composition, according to volume—viz.: carbonic acid, 23·65; carburetted hydrogen, 11·00; carbonic oxide, 15·96; and hydrogen, 49·39. In order to obtain something conclusive as to the nature of coal gas, a quantity of coal was heated to redness in a combustion tube, in such manner that the gaseous products of distillation were not obliged to traverse the red-hot layers of coal. The gas was first conducted into a cool receiver, where it deposited the liquid products of distillation—after which it was freed from carbonic acid and sulphuretted hydrogen, by means of a solution of oxide of lead in potash, and also from water, by being made to pass through a tube, filled with chloride of calcium, leading into an eudiometer, standing over mercury. Some was also led over red-hot oxide of copper, and yielded 0·23749 grammes of carbonic acid, and 0·2239 grammes of water, with 277·27 cubic centimetres of aqueous vapour; which quantities lead to the following composition:—light carburetted hydrogen + 73·18; carbonic oxide + 14·08; hydrogen — 8·89; olefiant gas — 24·33. An iron furnace is considered as an apparatus destined to carry on chemical processes of the most varied kind; these begin at the top of the furnace, and stretch downwards to its hearth in well-defined succession. The final products of all these operations appear partly at the hearth, and partly at the mouth—in the latter, in the form of a column of combustible gas; in the former, in the liquid form of slag and cast-iron; the nature of the combustible gas stands in a relation so intimate to the changes suffered by the materials put into the furnace, that its different composition in the various regions of the furnace indicates the changes suffered by the materials introduced, as they descend in their way to the entrance of the blast. The former experiments have received renewed confirmation and extension from the present inquiry, and show—1. That the oxygen introduced by the blast is burned in the immediate vicinity of the tuyère.—2. That the oxygen is converted into carbonic oxide also in the vicinity of the tuyère; and, finally, 3, that the coal loses all its gaseous products of distillation much above the point at which its combustion commences. The result proves that gases from furnaces contain—1, nitrogen; 2, ammonia; 3, carbonic acid; 4, carbonic oxide; 5, light carburetted hydrogen; 6, olefiant gas; 7, carburetted hydrogen of unknown composition; 8, hydrogen; 9, sulphuretted hydrogen; 10, aqueous vapour. Here follows a description of the processes carried on for examining with the greatest nicety the various compositions, and elaborate tabular statements of the results; and the authors come to the remarkable conclusion that, in the furnaces of Alfreton, not less than 81·54 per cent. of the fuel is lost in the form of combustible matter still fit for use; and that only 18·46 per cent. of the whole fuel is realised in carrying out the processes in the furnace. The gas collected 2 ft. 9 in. above the tuyère was entirely free from oxygen; and, what is still more remarkable, not a trace of carbonic acid. Olefiant gas could not be present—as the gases, produced in the region of the furnace, are evolved from materials long exposed to a white heat; cyanogen, however, was found in the gaseous mixture in such quantity as to be quite sensible by its smell, and by giving the flame its characteristic purple colour; and the experiments have proved the combustibility of the entire column of gas from a depth of 24 feet to the mouth of the furnace. The next division of the subject is the application of the gases to practical purposes; and it recommends that it should be drawn from the upper part of the furnace, which would not deteriorate the process, and with additional advantage as fuel. The gases of our blast furnaces, fed with coal, contain a valuable ingredient—ammonia—and in such abundance as to be sensible to the smell; and the authors had paid particular attention to the best methods for economising it: it may be obtained in the form of sal ammoniac, if the gas, previously to its application as fuel, be conducted through a chamber, containing muriatic acid; and if this solution of sal ammoniac be allowed to flow into an evaporising pan, over the surface of which a small part of the flame of the combustible gas is allowed to play, a convenient arrangement of the liquid, and of the burning stream of gas, would obtain a constant flow of a concentrated solution of sal ammoniac as an auxiliary in the manufacture; and without any further consumption of fuel, or any considerable expenditure of labour, a valuable commercial ingredient would be economised. From the experiments with the furnace coal at Alfreton, it appears that every 100 parts contain 0·769 of sal ammoniac; and, as 280 cwts. of coal are used every 24 hours, more than 2 cwts. of sal ammoniac would be produced without increased cost, or interfering with the process of smelting. Cyanide of potassium is also produced, and may be collected; and thus, in addition to the various uses to which this enormous quantity of gas which now escapes can be rendered useful, two, at least, valuable ingredients of commerce can be realised, and thus reduce the cost. The paper is a most valuable one, and will, no doubt, be productive of beneficial results.

EXPLOSIVE COTTON.—Prof. Otto (of Brunswick) one of the discoverers of the means of rendering cotton explosive—which created such a sensation at the meeting of the British Association—thus describes his process of manufacture:—"In order to obtain explosive cotton, I steep it for half a minute in strongly-concentrated nitric acid, which I prepare by the distillation of 10 parts of dry saltpetre, and six parts of oil of vitriol. I then wash it immediately in water, renewing the water so as to get rid entirely of the acid, taking care to separate the portions which adhere too closely together. It is then dried, and the process is thus completed." The effects of this preparation have astonished all persons who have witnessed them. The smallest quantity of this cotton placed upon an anvil, and struck with a hammer, produces an explosion equal to that of fulminating mercury. When a light is set to it, it explodes like gunpowder; and in a gun it produces all the effects of gunpowder in much smaller quantities. The explosive cotton is to be used precisely in the same way as gunpowder. It is made up in a kind of plug, after which a wadding is introduced, as with gunpowder, and over this a ball is placed, and all are rammed down with a ramrod. The explosion of the capsule produces that of the cotton.—A correspondent also informs us, that the gun cotton can be prepared by steeping it for half-a-minute in fuming nitric acid (*rauchende saltpetersaure*), and then press it between two pieces of glass; it is afterwards to be soaked in water for a short time, and, when dried, is ready for use.

THE MENAI AND CONWAY TUBULAR BRIDGES.—The directors of the Chester and Holyhead Railway Company entered into contracts on Wednesday the 14th, for the construction of the tubular bridge across the River Conway, and also for the construction of a great portion of that across the Menai Straits, to be called the Britannia Bridge. The Conway Bridge is to be completed and fixed in its place in eight months from the present time. The Conway Bridge is 400 ft. span; the Britannia Bridge 450 span. The greatest span of any *rigid* bridge hitherto executed is 240 ft.

INSTITUTE OF MECHANICAL ENGINEERS.—A meeting has been lately held in Birmingham, at which it was resolved to establish an institution under the above title. There can be no doubt that it is greatly wanted, and that a little exertion must make it alike popular and useful. So that it is founded on a basis sufficiently broad and comprehensive, there can be no objection to its embracing every department of mechanical science, although it is more than likely that railway engineering, and the improvements therein which are daily thrusting themselves upon public notice, will claim the largest share of attention. We look forward to this society as one which will elevate the rising talent of the day above the trammels of local connection, which will elicit sparks of truth in despite of the desire of every instructor to retain his own peculiar system, and which will encourage genius to burst the fetters which fixity and uniformity of gauge have been too successful in placing round it. Whatever engineers of particular railways may feel compelled to adopt as the groundwork of there studies and experiments, the expanding intellect of the country, cheered on by the attractive stimulant of emulation, will not permit itself to be confined within the limits of the past to develope the wonders of the future. While questions relating to the strength, form, and weight of rail, are under discussion, an argument as to their breadth apart can scarcely be prevented; nor while outside cylinders and enlarged driving wheels are subjects of approbation, can the question of space between the wheels be altogether omitted. In short we look forward to this institution, founded as it honourably has been by some of the headlong supporters of the narrow gauge, as likely to do more to obtain a settlement of the question of the gauges than Parliament, the Railway Board, the press, or the travelling public ever could effect.

PROGRESS OF RAILWAYS—LONDON TO ABERDEEN IN ONE DAY.—The various Scottish railways which have received the sanction of the Legislature, in the session of 1845, will be opened about the same time. Several will be partially opened in the ensuing spring, and all in little more than 12 months. The opening of the Scottish railways will make a very great and important addition to the railway communication of the country. It is a curious fact, that in nearly every instance the railways now constructing on the other side of the Tweed will extend the communication in a northward direction, and may, indeed, be considered so many extensions of the great trunk lines of communication from London to the north of England. The Caledonian line, which will be upwards of 100 miles in length, is in effect a continuation of the Lancaster and Carlisle Railway, which is again a virtual extension of the Great North Western. Where the Caledonian ends at that part of the Edinburgh and Glasgow line which passes along Castlecary, the Scottish Central begins, and extending to Perth, a distance of 46 miles, it is joined by the Scottish Midland, which proceeds 33 miles in a northern direction. The Scottish Midland will effect a junction with the Aberdeen line at Twfkhom; and the Aberdeen line being about 50 miles in length, we shall thus have an uninterrupted railway communication from Carlisle to Aberdeen, a distance of nearly 300 miles, which, with the Great North Western, will make a continuous line of communication all the way from London to Aberdeen. In other words, an early riser will, in little more than 12 months, be able to start from the great metropolis in the morning, after breakfast, and, having travelled the immense distance of 500 miles, reach Aberdeen in time for supper.

STEEL.—Three kinds of steel are now principally manufactured; bar or blistered steel, shear steel, and cast steel. The bar or blistered steel is made by the process of cementation; this consists in putting bars of the purest malleable iron alternately with, layers of charcoal or soot into a proper furnace; the air being carefully excluded, and the whole kept at a red heat for several days. By this process the carbon combines with the iron, altering its texture from fibrous to granular or crystalline, and rendering the surface blistered. The action of the carbon occasions fissures and cavities in the substance of the bars, rendering them unfit for tool-making, until they are condensed and rendered uniform by the operation of *tilting*—*i. e.*, compression by a powerful hammer, worked by machinery. Shear steel is made by breaking up bars of blistered steel into lengths of about 18 in., and binding four or six of them together with a steel rod, and then heating them to a full welding heat, the surface being covered with fine clay or sand to prevent oxidation. They are then drawn out into a bar, hammered, tilted, and rolled. In this state it is susceptible of a much finer polish, and is also more tenacious and malleable, and fit for making strong springs, knives, &c. Cast steel, which was first made by Mr. Huntsman, at Attercliffe, Sheffield, in 1770, is made by melting blistered steel, casting it into ignots and rolling it into bars. In this condition its texture is much more uniform, closer and finer grained. The different degrees of hardness required for steel are given by the process called tempering, and then quenching it suddenly in cold water. Its hardness and brittleness are thus much increased, but it may again be softened by exposure to heat simply.—*Beckmann's History of Inventions, Discoveries, and Origins.*

NISTER DALE IRON COMPANY.—TENDERS FOR LOANS.

—The WORKS of this company are now in full OPERATION at NISTER DALE, near Hachenburg, in GERMANY, and at SWINTON, near Rotherham, YORKSHIRE; and the directors, being empowered by the Deed of Settlement to raise additional capital for extension of the works, give Notice, that they are prepared to RECEIVE TENDERS for LOANS, on DEBENTURES, at £5 per cent. interest.—The holders of the debentures will have the option of converting the same into shares, at any time within three years, and the interest will be paid half-yearly, at the company's offices.

For further particulars, apply at the offices of the company, No. 10, Old Jewry Chambers, London; or to the company's solicitor, Mr. George Hume, No. 10, Great James-street, Bedford-row, London. By order of the board,

HENRY SCALE, Managing Director.

Sept. 23, 1846. F. W. EMERSON, Clerk. 55

THE TAFF VALE RAILWAY COMPANY are ready to

RECEIVE TENDERS for a SUPPLY of WHEELS, AXLES, SPRINGS, and other IRONWORK, used in the construction of coal waggons.—Specifications and particulars may be obtained on application to the secretary, at the company's offices, in Cardiff.—Cardiff, Oct. 12, 1846. E. KENWAY, Secretary. 56

THE TAFF VALE RAILWAY COMPANY are ready to

RECEIVE TENDERS for SAWN TIMBER, for 500 COAL WAGGONS.—Specifications and particulars may be obtained on application to the secretary, at the company's office, in Cardiff.—Cardiff, Oct. 12, 1846. E. KENWAY, Secretary. 57

CALEDONIAN RAILWAY.—TWENTY-FIVE POUNDS SHARES.

—The directors hereby give notice, that the TWENTY-FIVE POUNDS SHARES, in the CALEDONIAN RAILWAY COMPANY, are now in COURSE of REGISTRATION; and they request those parties who have not yet forwarded their scrip, to do so without delay. By order,

J. BUTLER WILLIAMS, Secretary.

129, Princes-street, Edinburgh, October 1, 1846. 58

NORTHERN COUNTIES UNION RAILWAY COMPANY.

—Notice is hereby given, that the SHARE CERTIFICATES will be in course of DELIVERY on and after the 31st day of October inst., at the offices of the company, 1, Poet's Corner, Westminster.—Proprietors who have not received the return of £1 2s. 6d. on the original Leeds and Carlisle shares, are requested to send in the same without delay. This scrip will require to be left for seven clear days with the secretary, for examination. By order,

CHARLES LODOCK WEBB, Secretary.

Company's Office, 1, Poet's Corner, Westminster. 59

NEWCASTLE-UPON-TYNE AND CARLISLE RAILWAY.

PAYMENT OF DIVIDEND.

At a General Meeting of the directors, held this day, it was resolved—

That an intermediate dividend be declared, for the half-year ending the 30th day of June last, of £2 15s. per whole shares, and in proportion for the quarter shares—such dividend to be paid, free from the income tax, on and after the 24th day of October next.

Attendance will be given, for the above purpose, at the office of the company, Forth, Newcastle-upon-Tyne, on the 24th, 26th, and 27th, and at the Bush Inn, Carlisle, on the 30th and 31st days of October. Dividends not applied for at the times above-mentioned, will be paid afterwards, in the ordinary course of business, at the Newcastle office. 60

*** Scrip for shares must be forwarded to this office two clear days before payment, in order to have the dividend endorsed upon the scrip, which will be promptly returned, with the amount.

The transfer books will be closed on and after the 10th, and will be re-opened on the 24th of October. By order,

JOHN ADAMSON, Clerk to the Company.

Newcastle-upon-Tyne, Sept. 25, 1846.

CAMERON'S COALBROOK STEAM COAL AND SWANSEA AND LOUGHOR RAILWAY COMPANY.

At a Special Meeting of the proprietors, or shareholders, in Cameron's Coalbrook Steam Coal and Swansea and Loughor Railway Company, held pursuant to advertisement, at the offices of the company, No. 2, Moorgate-street, London, on Wednesday, the 14th day of October, 1846, JACOB MONTEFIORE, Esq., in the chair.

The advertisement convening the meeting having been read, the report of the directors was read and a statement submitted by the solicitor of the company; whereupon it was

Resolved unanimously,—

That the report submitted by the directors, and the recommendations therein contained, be received and adopted, and that the same be entered upon the minutes of the company.

Resolved unanimously,—

That the directors be instructed to have the book, called the "Register of Shareholders," authenticated, by the common seal of the company being affixed thereto, in terms of the 9th section of the Act 8 Vic., cap. 16.

Resolved unanimously,—

That N. P. Cameron, Esq.
W. B. J. P. Cameron, Esq.
Sir A. P. Green
Jacob Montefiore, Esq.
Captain E. N. Norcote
Captain Samuel Price
J. J. Rippon, Esq.
A. H. Earle, Esq.
E. G. Winthrope, Esq.

be elected directors of Cameron's Coalbrook Steam Coal and Swansea and Loughor Railway Company. 61

Resolved unanimously,—

That Wm. Wellington Cooper, Esq., and Thomas Strelley, Esq., be elected auditors of the company. J. MONTEFIORE, Chairman.

Resolved unanimously,—

That the thanks of the shareholders are due, and are hereby given, to the chairman, for his able conduct in the chair this day, and the lucid statements of the affairs of the company submitted to the meeting. J. HOWDEN, Secretary.

2, Moorgate-street, Oct. 14, 1846.

NEW SHARE & MONEY MARKET, ROYAL EXCHANGE.

ADVANTAGES.

1. To facilitate, more beneficially to the public, the *bond fide* sale and transfer of shares in public companies and Government securities, by effecting a saving to both buyer and seller.
2. To enable the public, under certain regulations, to effect sales and purchases themselves. And—
3. To establish a register of all transactions. 62

EXPLANATION.

Scrip and share certificates to be offered for sale must be deposited at the Royal Exchange Register-office, and a market price fixed—a list of such shares, with the price attached will then appear in the *Times* journal, &c.; a similar list will be publicly exhibited at the Royal Exchange daily, and at the Register-office facing Cornhill. Parties in want of shares not comprised in those offered for sale must state the particulars of the shares they require, and the price they will give; and upon depositing the money, such shares will be included in a list of shares wanted, which will appear in the like public manner, giving information to the advantage of those who may wish to sell.

The buyer and seller will, by this means effect, their mutual objects, and save "the turn of the market," which is usually from 2s. 6d. to 20s. per share in scrip, and from £1 to £5 per share in the established securities.

By thus throwing open the Money Market, the public will be enabled to purchase from the actual owner, and will no longer be compelled to submit to the loss of buying at the highest price and selling at the lowest—the consequence of four parties being employed between the buyer and seller. For example:—A wants to sell, and B wants to buy, 20 shares in the Manchester and Leeds Railway, which are at 23 to 28 premium (*vide* the *Times*, September 23d); A applies to his broker (1), who goes to a jobber (2), and the sale is effected at 23 premium, the lowest price quoted. B, who wants to buy, applies also to his broker (3), who goes to a jobber (4), and the purchase is made at 28 premium, or the highest price quoted. Thus, four parties interpose, and in the transfer of only 20 shares, £100 are wholly lost to the buyer and seller; whereas, if they could have publicly registered their wants, and thus made them known to each other, each party would save £50.

The (registered) wants of individuals in the New Share and Money Market, whether of shares for sale, or of shares wanted, will now be open to public competition, which, aided by the rapid distribution of lists in the *Times* journal, &c., and the prices being fixed and certain, parties in every part of the country will possess nearly the same facilities of purchase or sale as those who are on the spot, an advantage the public will know how to appreciate. An open market must offer greater advantages than a market wherein the public are not permitted to enter, and where shares are offered to an individual jobber in the most private manner, and where, too, frequently it is asserted "no buyer," or, in other words, "no market," is to be found, or where an enormous sacrifice is the consequence of "forcing" a sale.

The securities offered in the New Share and Money Market will comprise:—Shares in all railways, joint-stock banks, fire and life associations, mining, gas, and water companies, and an infinite variety of others, and Government securities, British and foreign.

With a view to protect the public against fraud, all scrip shares deposited at the Register-office will be referred to the offices of the companies whence they were issued.

Advices of sales or purchases will be forwarded, and proceeds disposed of, according to instructions.

Parties wishing their shares, &c., to appear in the first published lists, must deposit them at the Transfer Register-office as under, on or before the 21st instant, after which date shares, &c., must be sent in before 4 o'clock each day, in order to appear in the journals the following morning.

STEVENS, HANSARD, & Co.,
Transfer Register-office, Royal Exchange, London.

N.B.—The charges are the same as the brokers', but no charge will be made for the registration of "shares wanted," or "shares for sale," unless the sale be effected.

IMPORTANT TO RAILWAY COMPANIES. 63

PATENT KAMPTULICON COMPANY, 18, CORNHILL.

This company having completed their new factory, are prepared to supply railway managers and contractors with an elastic material (perfectly non-absorbent) to place between the rails and sleepers, and between the frames and bodies of carriages, to prevent jarring, and, consequently, wear and tear. The elastic planking is strongly recommended to be used for the backs and sides of carriages, to prevent splinters when accidents occur.

By order of the board, P. G. GREVILLE, Secretary.

EMERSON'S PATENT CEMENT PAINT,

PATENT CEMENT AND PAINT MANUFACTORY, AND STEAM-MILLS,
20, CREIGHTON-STREET,
LOWER END OF TOWNSEND-STREET, DUBLIN. 64

The PATENTEES have just completed their arrangements for the introduction of this VALUABLE and ECONOMIC PAINT. It is perfectly waterproof, and being in a liquid or pasty state, may be applied at once from the cask, by any simple workman, with a common paint-brush—thinning it, as may be requisite, with water.

The surface to which it is to be applied needs no preparation, but to be clean and free from dust. It matters not whether the walls be wet or dry, its adhesiveness being such that it will cling to any surface—brick, stone, slate, tile, or Roman cement, and may be MADE of ANY TINT or COLOUR, to suit the taste of the consumer—its present colour being that of a light creamy, or stone, colour.

To Roman cement it may be applied the day after it is put on the walls, and one small cask will cover a moderate-sized house.

It is particularly calculated for country houses, villas, &c., from its permanency and pleasing effect; also for lodges and entrances, as it does not absorb moisture; and, consequently, will preserve the walls as effectively as any cement.

FOR ROOFS.—All loose or vegetated mortar should be removed, then apply the paint, with a brush, stopping up all holes or crevices, which will cement the entire roof in one solid mass, so as to render it perfectly impervious to water for many years to come.

Sold at the manufactory, in iron-bound casks, containing 1 cwt., at 6s. 6d.; 2 cwts., 12s.; 3 cwts., 17s. 6d.

N.B.—The paint can be sent by steamers every day, to London, Liverpool, Bristol, or Glasgow, at a trifling expense.

NEW BRIDGE AND TAFF VALE COLLIERY,

GLAMORGANSHIRE.—2000 shares at £10 each.

This valuable colliery is situate in the parish of Llanwonno, in the county of Glamorgan, in the centre of the South Wales Mineral Basin, contiguous to New Bridge, 12 miles from Cardiff; and the Taff Vale Railway, from Cardiff to Merthyr Tydvil, runs through the property—granted, by a lease of 360 acres, for the term of 31 years. The property is surrounded with profitable collieries—one of which (Mr. Comin's) adjoins this, and supplies the Great Western Railway. Three veins are found to be throughout this property—the Goflon Vein, 3 ft. thick—the Cummor Vein, 9 ft. thick—and Comin's Vein, 4 ft. thick. These veins—proved by the usual computation—will yield an aggregate quantity of *two millions tons*. This, by working 200 tons per day, from one pit only, at a profit of 2s. 6d. per ton, will yield a clear income of upwards of £7500 per annum; but, as this rate of produce will last considerably more than thrice the period of the lease, the colliery will be worked by more pits, and, consequently, yield a profit of at least £20,000 per annum, at a cost of, say, 5s. per ton, and sale 8s. 6d. per ton; but Mr. Comin obtains considerably more per ton; and, therefore, it is but fair to suppose the present company will obtain the same; in which case, the profit will be upwards of £30,000 per annum. Even this large sum cannot be supposed to be too highly estimated, when it is recollected that the utmost cost is estimated at 6s. per ton, and the sale only at the moderate price of 8s. 6d. per ton—whereas all coal in the district is sold above the estimate, and that the Taff Vale Railway runs through the property—that the colliery is within 12 miles of the large shipping port of Cardiff—that the coal can be raised from the pit and directly placed on the railway waggons—and that the coal is known to be of superior quality for steam-engines, from the fact of its being used by the Great Western Railway. The colliery will be in full operation in about two years. For the first year the shareholders will receive a dividend of only 5 per cent. out of the first year's produce; but, as in the meantime, the Goflon and Cummor veins will be reached, and be in gradual increase of produce—the second year's dividends will be large; and, therefore, there is every fair reason to say, this undertaking, not only carries the certainty of large profits, but presents fairer and more legitimate prospects of remuneration to the shareholders, than was ever presented to the public. 65

COST OF PRODUCTION AND CARRIAGE TO SHIPPING PORT.

Getting or Winning ..... per ton	1s 7d	Wear and Tear	0s 3d
Underground hauling	0 4	Railway Carriage to Port	1 1½
Dead Work	0 8	Shipping Expenses	0 6
Prop Wood	0 1	Divers extra expenses	0 3
Royalties	1 9	Agency and Incidental Charges	0 2½
Total			6s 0d

Sale, 8s. 6d.—Cost, 6s. 0d.—Profit, 2s. 6d. per ton.

Application for shares, to be made to Messrs. Roberts, Carter, and Co., mineral surveyors, 21, Portman-street, Portman-square, where the engineer's calculations may be seen in detail (also a plan of the property, and conditions obtained).

Prospectuses, &c., may be had at the office of the *Mining Journal*, 26, Fleet-st., London.

SILVER-LEAD MINES, ABERGWESSIN, BRECKNOCKSHIRE.

—1000 shares, of £10 each.

Counting-house on the Mines—Manager and Purser, Messrs. Couch and Pell.

LONDON AGENTS.

Messrs. Roberts Carter, and Co., 21, Portman-street, Portman-square. 66

These mines comprise the whole of the Nant-y-Brain and Gwegallhendda Estates, and also half-a-mile of the Trawsnant Estate; the whole comprising a run of nearly two miles on the course of five large lodes or veins, which have been wrought so productively in Lord Cawdor's mines.

The veins on this property are in a beautiful killas, firm, yet sufficiently soft to be good standing and working ground. They are composed of gossans, flookans, prian, pulverized mundics, &c., &c., of the most beautiful description, intersected throughout with prills, strings of lead, and friable ores. The first vein cut through by the adit level is 8 ft. wide, at 2 fms. from surface; the next is upwards of 20 ft. wide, and at the adit level 7 fms. from surface; would pay for saving work, two tons of ore having been saved in cutting through the vein. The third vein passed through in the adit level is only about 4 fms. south of the second, and is 25 ft. wide, and studded through with gossans, prian, mundics, and spots of lead.

The leases of the Abergwessin Mines are duly executed for 21 years, at a royalty of one-twelfth, for the first 10 years, and one-tenth for the remainder of the term. In the Nant-y-Moyn part, these veins have been wrought for very many years, and have yielded more than 1,000,000*l.* profit. They are now working by Messrs. Williams and Company, at Scorrier House, Cornwall; and, at the high royalty of one-eighth, are returning great profits. The mineralization of the veins presents the same characteristics in each mine.

In Lord Cawdor's mine, west, the veins are proved to have formed a junction at the base of the mountain; and a precisely similar junction of the veins is proved to exist eastwards, at the base of the mountain in the Abergwessin Mines, where the veins are all laid open at surface; three of these veins have been cut through by an adit level or tunnel, now continuing to cross-cut the other veins. This adit can be carried into the mountain 80 to 100 or more fms. deep, on the course of each vein. These mines have also the great advantage of being conveniently wrought at three several points.

It is intended to make communications from shaft to shaft, by the cross drifts, which will cut the lodes at the 10, 20, and 30 fm. levels under adit; when dividends may be confidently anticipated, as the lodes in this property are richer at the same depth than they were in Nant-y-Moyn.

About a mile from these operations, and in this property, a shaft has been sunk, and one of the lodes cut, under very favourable circumstances.

There is ample water power for drainage and surface operations, slate for roofing, brick and fire clay, and stone for every purpose—also, abundance of peat of the finest quality, for the use of the mines, free of any charge.

Assays of the ores have produced 80 per cent. of pure lead.

Prospectuses and plans can also be had, on application, at the office of the *Mining Journal*, 26, Fleet-street, London.

CONDITIONS.

1. All the transactions of the company to be conducted on the Cost-book Principle.
2. That the capital of the company be £10,000, in 1000 shares of £10 each, of which £5 is to be first paid to cover the proprietors' outlay for workings, machinery, and charges of every description, up to the 1st of July, 1846; the remainder £5 by instalments, or calls not exceeding £1 each, at intervals of not less than three months, of which notice will be given in the *Mining Journal*, the *Times*, and local newspapers, when the instalments are to be paid into the bank; if not paid within the date of such notice, the shares shall be forfeited for the benefit of the general proprietary.
3. That all moneys belonging to the company be deposited in the National Provincial Bank of England, at Brecon, to the credit of the company, in the names of the trustees; and drawn therefrom by cheques, and signed by one of them, and counter-signed by the manager and purser, in such sums only as will cover the current monthly costs; that all materials, labour, and bills, may be discharged at the end of every month, and that vouchers be produced to that effect.
4. That a general meeting of the shareholders may be held quarterly, on the mines, of which due notice will be given by circular from the purser, when all matters relating to the company's affairs will be detailed.
5. That the mining operations, and the general matters appertaining to the company's interest in the mines, be conducted by the manager and purser, who alone shall be responsible for all debts contracted, so that no shareholder shall be liable for any amount beyond his or her respective shares.
6. That the purser shall keep a book, wherein he shall enter the name and abode of each shareholder, and the number of his or her shares; and in case of sale or transfer, the seller shall send to the purser the number of the shares sold or transferred, with the proper address of the purchaser; and every share not so entered will not be recognised by the company.
7. The reports of the agents of the mines, and the books of the company, shall be open to the inspection of the shareholders at all reasonable times, at the office, on application to the manager and purser.
8. The leases and legal titles of these mines, and all the property, machinery, effects, and assets of the company, shall be, and are henceforth, vested in the trustees—Messrs. Walton Pell, Jun., of Clipston, and Peter Paul Couch, of Nant-y-Brain House—on behalf of, and according to, each of their respective shares and interest, &c., to distribute and pay, in accordance with the rules and regulations entered in the cost-book of these mines, quarterly or half-yearly, all dividends, profits, and bonuses, to all such parties as now are or hereafter may become proprietors of shares in these mines.
9. All parties interested in these mines, shall receive a certificate of the number of shares held by him or her, which will be transferable; the holder will be entitled to receive all dividends, profits, and bonuses, from time to time, but will not be allowed to vote at any meeting, or have a vote in the management of the affairs of the company, until such proprietor shall have made application to be registered as a shareholder in the cost-book of these mines, three months previously to such meeting.
10. That the London business, and the correspondence of, and relating to, these mines, shall be transacted and carried on at the offices of Messrs. Roberts, Carter, and Company, mineral surveyors, and general investment agents, 21, Portman-street, Portman-square, with whom also shall be deposited a duplicate book of the certificate holders of shares in the said mines, and also copies of the cost-sheet report of the mine, and resolutions of the quarterly general meetings of the shareholders hereinbefore appointed to be held on the mines.
11. A general meeting of the shareholders may be called at any time, by a requisition signed by shareholders holding not less than one-fifth of the whole number of shares, addressed to the purser or manager at the offices of the company on the mines.

UNIVERSAL GAS BURNER—THIRTY TO FIFTY PER CENT. SAVED!

—The PATENTEES beg to call public attention to the following facts. The advantages resulting from the invention are various and striking. Independently of a saving of 30 to 50 per cent., the combustion is perfect, and the brilliancy produced superior to any light hitherto discovered. It emits neither smell nor smoke, and burns steadily for any period; and such is its purity, that it neither affects nor soils the most delicate colour or the finest fabric. Objections have been made to the introduction of gas in dwelling-houses, to the expense of fittings, to its destruction of furniture, draperies, gold moulding, &c.; these are entirely obviated by the PATENT UNIVERSAL GAS BURNER. As the cost of laying on gas is much lower than is commonly supposed, it is adapted for private dwellings, as well as for club-houses, hotels, manufactories, and public buildings. One of the small burners is amply sufficient to light a good-sized room, at a sum immeasurably lower than spirit, oil, or candle, with the avoidance of waste or trouble. 67

The merits of the "Burner," its brilliancy and economy surpassing every other known light, are shown by the annexed authentic opinions of the qualities of the UNIVERSAL GAS BURNER.

EXTRACT from the "Proceedings of the Institution of Civil Engineers," Tuesday, May 26, 1846—Sir JOHN RENNIE, president, in the chair.

"A gas burner, of a novel and ingenious construction, was exhibited. The principal novelty was the introduction of a stream of air to the centre of the flame by a hollow button in the middle of the burner. The air passing up through the hollow stem of the button, was heated, and passed out by two series of fire-holes around the periphery, and impinging with force on the flame of the gas curved it outwards in the shape of a tulip, while the oxygen of the air, mingling with the carburetted hydrogen gas, produced a very perfect combustion. The *flame was quite white down to the top of the burner*—was very steady, as was amply demonstratedby the excellent light of the Institution, where these burners have been used. In comparing the consumption of these burners with that of the concentric ring burners, and trying the power of the two lights by the photometer, the new burner gave a better light, with a saving of rather more than one-third.

CERTIFICATE.

POLYTECHNIC CHEMICAL SCHOOL.—"In testing Clark, McNeil, and Co's Universal Gas Burner with one of the best shadowless burners, *it gave a more pure and brilliant light*, with a saving of 20 to 25 per cent."

GEORGE CRISP, *Engineer*, ROBERT LONGBOTTOM, *Secretary*.

CERTIFICATE.

"In a series of experiments made upon Clark, McNeil, and Co.'s Patent Universal Gas Burner, its superiority was satisfactorily established in economy and the quality of the light; tested against argand burners, Nos. 4 (12 holes), and 5 (16 holes), it afforded a saving of at least 25 per cent., and against three fish-tails burners, No. 4, 40 per cent. *The colour and brilliancy of the flame is superior to any other burner.*"

T. W. KRATTS, *Consulting Chemist*, J. D. PALMER, *Mechanical Inspector*.

The UNIVERSAL GAS BURNER is used nightly at the Polytechnic Institution, and may be had and seen from 11 till 4, at the patentees, 60, St. Martin's-lane Charing Cross, and of all gas fitters in London.

SAFETY LAMP.—TESTIMONIAL TO Dr. CLANNY.

TO THE PUBLIC.

The committee appointed to carry into effect the above object, feel it necessary briefly to lay before the public the grounds upon which they are called upon to insert their names in the subscription list. About the year 1812, this district was visited by several colliery explosions, of the most awful and extensive description; many were the speculative suggestions thrown out as a remedy for these disasters—and among the rest, the scientific talent and humane feelings of Dr. Clanny were enlisted in the cause. In the course of his investigations of the nature of the explosive mixtures, and his researches as to the preventive measures made use of in the working of coal mines, he discovered that the only means of carrying on mining operations in explosive air was by the steel mill, which not only afforded the most desirable light, but was oftentimes known to be the cause of explosion. The energies of his mind were then set to work to discover a substitute affording a better light, and also attended with less danger than the steel mill. In the course of his studies, he conceived the expedient of a safety lamp, greatly different, it is true, from the safety lamps in present use, for its principal was that of an insulated light fed by atmospheric air from without. 68

Amongst other laudable exertions for the obviating of these awful visitations, was the "Society for Prevention of Accidents in Coal Mines," established in Sunderland, in 1813, of which the late Sir Ralph Milbank, Bart., was president. This society consisted not only of philanthropic and scientific gentlemen, but also of practical viewers, of whom the late Mr. Buddle, the present Messrs. George Johnson, Matthias Dunn, &c., were members; and it was before this society that this lamp of Dr. Clanny was first exhibited, in the year 1813—being beyond all question, the first attempt that ever had been made to produce a lamp calculated to burn safely in an explosive atmosphere. In May, 1813, a paper was read before the Royal Society, entitled "On a Steady Light in Coal Mines, by Dr. Reid Clanny," which was soon afterwards published in the *Philosophical Transactions*. On the 1st of October, 1813, the safety lamp was exhibited at the Literary and Philosophical Society, Newcastle-on-Tyne. And on the 16th October, and the 26th November, 1815, experiments were made in the explosive air of the Herrington Mill Pit, belonging to the late Sir H. V. Tempest, and certificates of its usefulness, signed by J. U. Holmes, W. Patterson, Jos. Gleghorn, Anthony Hopper, and Geo. Patterson.

Now, it was not till the year 1815 that Sir H. Davy turned his attention to the subject; and, on the 1st January, 1816, his first lamp was tried at Hebburn Colliery. Simultaneous with his invention, was that of Mr. George Stephenson—so that, from the above facts, there is not a shadow of doubt that to Dr. Reid Clanny is due the merit of having been the first to conceive, as well as to carry into effect, the construction of a safety lamp to burn in the explosive air of coal mines.

To Sir H. Davy was honourably awarded a present of plate, worth £2000, and Mr. Geo. Stephenson was also awarded with a very considerable sum of money—suitable to his then condition of life; but owing to some causes which cannot be explained, without the risk of an invidious inquiry, the merits of Dr. Clanny have been entirely overlooked, except by the Society of Arts, whose gold and silver medals he has received; and what adds to the injustice of public neglect is, that from the aforesaid period he has been incessantly working at the production of improved lamps, at a great cost of money and time, actuated by humanity and the desire of being of service to his fellow creatures.

It is no part of the intentions of the committee to discuss the merits of the lamps of Dr. Clanny with the inventions or improvements of any other of the now numerous constructors of safety lamps—all that they claim for him is originality of conception, followed out by the construction of the very first safety lamp that ever was invented, however, much the first idea may have been since improved by others; and they confidently submit their case to the public as entitling them to receive such support as the hitherto unrewarded merits of the individual seem to entitle him.

PRESIDENT.

THE MOST NOBLE THE MARQUIS OF LONDONDERRY, G.C.B.

VICE-PRESIDENT.

R. S. PEMBERTON, Esq., High Sheriff of the county of Durham.

COMMITTEE.

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J. J. Wilkinson, Esq., barrister-at-law, 8, Church-row, Stoke-Newington, Lond.	R. M. Glover, M.D., Secretary.

Address of Secretary—12, Northumberland-street, Newcastle-on-Tyne.

Subscriptions will be received by the respective banks in Newcastle, Sunderland, and Durham, and by any member of the committee; subscriptions will also be received at the office of the *Mining Journal*, 26, Fleet-street, London.

Newcastle, Sept. 6, 1846.

BAGMILL TONTINE.—PROSPECTUS of a TONTINE,

for the DISPOSAL of a valuable FREEHOLD FARM, in the fertile parish of ST. STEPHENS, by Saltash, CORNWALL, now in the possession of the owner.

Amount to be subscribed, or paid, for the purchase of the farm, and the defrayment of the expenses of the formation of the Tontine, £4000.

In 200 shares, of £20 each.—Deposit £5 per share.

TRUSTEES.

WILLIAM HENRY PRANCE, Esq., of Plymouth.
GEORGE B. MURLY, Esq., of Langport. 69

BANKERS—The Devon and Cornwall Banking Co., Plymouth, and its several branches.

SOLICITORS.

Mr. H. A. Olney, Saltash; Messrs. Woolcombe, Square, Stephens, & Prance, Plymouth.

DESCRIPTION OF THE PROPERTY.

The estate, or farm, called Bagmill, comprised in the above Tontine, is situate on the banks of the navigable part of the river Notter, in the said parish of St. Stephens; distant about one mile from the proposed Cornwall Railway, which is intended to pass the river Tamar, by a bridge at Saltash, already authorised by Act of Parliament. It consists of a dwelling-house, garden, barn, and other suitable farm buildings, and contains above 48 acres of arable, meadow, orchard, and pasture land. It is watered by several never failing streams, which, by judicious management, and a small outlay, might be so diverted as to irrigate, if required, nearly half the estate, and might be applied, if necessary, to the working of powerful machinery. The estate was recently let on lease, at the annual rent of £100; but is now in the hands of the proprietor.

PLAN OF THE TONTINE.

Each subscriber shall have the option of naming either himself or herself, or any other person whose age next birthday shall not be less than 70 years, but shall not be at liberty to appoint any nominee who has been previously named.

The surplus rents after payment of the current expenses of the management of the Tontine, to be divided annually on the 25th day of March, among those subscribers or proprietors whose nominees were living on the 25th day of December preceding.

Each party, on subscribing for a share or shares, is to pay a deposit of £5 per share to the banking company above named, to the credit of "The Bagmill Tontine," and shall, before the expiration of 30 days after such payment, deliver to the solicitors a written nomination of a life as his or her nominee, in respect of each such share, whose age on the next birthday shall be at least 70 years, accompanied by a certificate of baptism of such nominee, or by such statutory declaration, or other evidence of the age of such nominee, as the solicitors shall reasonably require; and shall pay the residue of his or her subscription on the 25th day of December next.

That, if any of the nominees shall die before the whole of the shares shall have been taken, either by subscribers, or by the owner of the farm, as mentioned below, the party nominating such life may substitute another, whose age on the next birthday shall not be less than 70 years, as aforesaid.

Upon the death of all the nominees, save one, the Tontine shall be determined, and the whole of the said farm shall become the absolute property of the subscriber or proprietor, owning a share or shares, as the case may be, upon the life of the last surviving nominee; unless it shall happen, that one person shall at any time be entitled to the whole of the shares, in which case the trustees shall convey the property absolutely to such person; but that it shall be competent for all the proprietors for the time being, to determine the Tontine at any earlier period.

The Tontine is to be completed by the 25th day of December, 1846, or sooner, if filled up, when the property shall, with all convenient speed, be vested in the names of the two trustees. And in case any subscriber shall either neglect to appoint a nominee, or fail to pay the remainder of his or her subscription money, then his or her share or shares, with the deposit paid thereon, shall be absolutely forfeited to the owner of the farm, as if not subscribed for, and in this respect time shall be considered as the essence of the contract. And, thereupon, the whole of the subscribed sum shall be paid over to the owner of the farm, subject to the payment thereout, by him, of all the costs and expenses of, or incident to, the formation of the Tontine, and preparation and execution of the deeds for effecting the same.

The farm is subject to a charge during the life of a person now aged 83, or thereabouts, against which the owner will enter into a covenant of indemnity with the trustees.

The trustees shall be always two in number; and, in case of a vacancy, it shall be filled up on the nomination of the majority of the votes of the proprietors, personally present at a meeting convened for such purpose. Each proprietor to have one vote in respect of every share held by him or her.

If, on the 25th day of December next, any shares shall remain unsold, the same may be taken by the owner of the farm, on his nominating such lives in respect thereof as aforesaid, if he should think proper so to do; but if he shall decline to take the same, then, unless the whole thereof shall be disposed of before the 25th day of March following, he shall return the deposits to the subscribers without any deduction.

A list of the subscribers, containing their names and residence—also the name, age, and residence of the nominees—will be furnished to each subscriber.

The necessary deeds shall be prepared by the solicitors to the Tontine; and the same shall be approved by counsel to be nominated by them.

Applications for shares, prospectuses, and plans, may be made to Mr. H. A. Olney, solicitor, Saltash; Messrs. Fuller and Saltwell, 12, Carlton Chambers, Regent-street, London; Messrs. Woolcombe, Square, Stephens, and Prance, solicitors, Plymouth; G.B. Murly, Esq., solicitor, Langport, Somerset, and to the Share Brokers of Plymouth.

FORM OF APPLICATION.

TO THE TRUSTEES OF THE BAGMILL TONTINE.

I request you will allot me shares, of £20 each, in the Bagmill Tontine, and I will accept the same, or any less number allotted to me, and sign the Deed of Settlement, and pay the deposit and remainder of the purchase-money thereon, when required.

Name in full .....
Address and profession, or business .....
Date .....
Name and address of referee .....

OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN.

J. MURDOCH (successor and late assistant to Mr. Hebert)

Informs INVENTORS and PATENTEES, that, at his OFFICE, they can obtain REFERENCE TO A CLASSIFIED LIST OF PATENTS, (THE ONLY ONE EXTANT), which shows at one view all the Patents ever granted for any particular object, whereby they may save much trouble and expense, and procure information not otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED. 70

SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms.

FINISHED and WORKING DRAWINGS executed with accuracy and dispatch.

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